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# Missouri Medicine

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**JANUARY, 1962**

VOLUME 59, NUMBER 1

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*References:* (1) Malone, F. J., Jr.: *Mil. Med.* **125**:836, 1960. (2) Martin, W. J.; Nichols, D. R., & Cook, E. N.: *Proc. Staff Meet. Mayo Clin.* **34**:187, 1959. (3) Ullman, A.: *Delaware M. J.* **32**:97, 1960. (4) Petersdorf, R. G.; Hook, E. W.; Curtin, J. A., & Grossberg, S. E.: *Bull. Johns Hopkins Hosp.* **108**:48, 1961. (5) Jolliff, C. R.; Engelhard, W. E.; Ohlsen, J. R.; Heidrick, P. J., & Cain, J. A.: *Antibiotics & Chemother.* **10**:694, 1960. (6) Lind, H. E.: *Am. J. Proctol.* **11**:392, 1960.

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## Curiosa et Trivia

**WILLIAM B. McCUNNIFF**

Researchers please copy: About six million people in the U. S. consume about 35 million pounds of snuff per year.

---

More than twice as many persons drown in bathtubs as in swimming pools. Cisterns, wells and cesspools account for as many drownings as pools.

---

During 1960 for every 1,000 population there were 263 persons injured by accidents.

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It's a lot of smoke. More than $1,544,000,000 worth of property was lost in fires during the last year.

---

This probably will never be clinically important in your practice: among omnivores, the mouse has a gallbladder, the rat does not; the cow and sheep, among the herbivores, do have gallbladders; but horses and deer are not similarly equipped.

## Capsule Clinics

- Aldactone (spironolactone) is effective in increasing the diuretic response and in preventing excessive urinary potassium loss during chlorothiazide therapy. Ogden, D. A. et al., New England J. M. **265**:358, 1961.
- Administration of spironolactone alone failed to lower blood pressure in seven nonedematous hypertensive patients. Georgopoulos, A. J. et al., Arch. Int. Med. **108**:389, 1961.
- Ingestion of bananas may produce a false-positive reaction for occult blood in the feces when the test used is based on the peroxide reaction. Turrell, R., Am. J. Surg. **102**:412, 1961.
- There are many preparations capable of relieving the symptoms of T. Vaginalis but none which will consistently "culture cure" the patient. Sweeney, W. J., and Cook, C. J., Am. J. Obst. & Gynec. **82**:515, 1961.

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# WASHINGTON

## Hill-Burton Program

Approved under the Hill-Burton Program, as of June 30, 1961, were 5,688 projects. A progress report on the Hill-Burton Program, issued by the U. S. Department of Health, Education and Welfare, covering the period from July 1, 1947, through June 30, 1961, shows that 4,088 projects are now completed and in operation, or 72 per cent of all projects approved to date. There have been 168,877 beds added, or an average annual increase of approximately 12,000 hospital beds. There have been 1,101 health units completed. The cost has been $3.2 billion total, or an average annual cooperative expenditure of $231 million by federal, state and local groups.

In progress at present are 1,600 projects under construction or in the planning stage which will add 70,069 beds and 495 health units, with $525 million in federal funds involved in these current projects.

Hospital and nursing home projects approved to date include 188,029 beds in general hospitals, 16,252 beds in mental hospitals, 7,142 beds in tuberculosis hospitals, 11,109 in chronic disease hospitals, and 16,414 in nursing homes.

General hospital projects account for 61 per cent of all approved projects, 79 per cent of all beds in approved projects, 80 per cent of federal funds allocated to date and include 13,680 beds for other services such as chronic disease, tuberculosis and psychiatric care.

The program began in August 1946 with authorization of funds for grants to states for surveys and assistance in construction of public and voluntary nonprofit general, mental, tuberculosis and chronic disease hospitals, public health centers and related facilities. In 1954 an amendment gave authorization for appropriation of specific funds for construction of public and voluntary nonprofit nursing homes, diagnostic and treatment centers, rehabilitation facilities and chronic disease hospitals. A 1958 amendment gave an eligible sponsor the option to take a long-term loan at a low rate of interest in lieu of a grant.

## War on Medical Quackery

The AMA and the Food and Drug Administration have each been fighting medical quackery for many years. This fall the first National Congress on Medical Quackery met in Washington under the joint sponsorship of the AMA and FDA. While the two have many differences of opinion, the consensus was expressed by HEW chief, Abraham A. Ribicoff, "We agree on many more things than we disagree on." It was agreed that joint action was needed if quackery is to be conquered. Under special discussion were nutritional, cancer and arthritis quackery.

There was disagreement on the need for further power for the FDA, the physicians on the panel taking the position that the greatest need is better enforcement of laws already on the books.

## Best Seller

A sell-out in the book department was a government bulletin on foods to stockpile for a nuclear attack. Requests for 1.5 million copies, at 10 cents each, depleted the supply.

## Tape Recording Continues

Tiros II, a U. S. weather satellite, expected to remain in orbit for approximately three months, completed a year in orbit on Thanksgiving day. To that time it had recorded 36,000 cloud pictures and weather data on 4 million feet of tape.

## Medico-Legal Forms

The American Medical Association has announced that the 1961 revised and expanded edition of "Medico-Legal Forms With Legal Analysis" is now available. Physicians and medical students may obtain single copies without charge. A charge of $1.00 per copy will be made to non-physicians.

The publication contains 49 pages, deals with 18 subjects and provides 47 forms ranging from letter of withdrawal from a case in conjunction with physician-patient relationship to authorization to use eyes (next of kin) in connection with the subject of autopsies.

Orders for copies should be addressed to Bernard D. Hirsh, Law Department, American Medical Association, 535 N. Dearborn St., Chicago 10, Ill.

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Across
Missouri

**Political Medicine Show**

On November 11, 1961, the *St. Louis Globe-Democrat,* following the White House Regional Conference in St. Louis, carried the following editorial and cartoon under this heading:

"No matter how sincere President Kennedy's purpose may be to inform the people and get their reaction to his domestic programs, the White House Regional Conference in St. Louis this week proved little more than a political medicine show.

"It could scarcely have been anything else with a conference cast, headed by Abraham Ribicoff, Secretary of Health, Education and Welfare, and political appointees leading every session.

* * *

"Since Mr. Kennedy knew the nature of this lineup, perhaps he intended it for a whoop-de-do to make grassroots medicine against the next Congress.

"At all events, the New Frontier production, the first of 12 scheduled over the country, offered an assortment of political snake oil.

"Various performers, notably Mr. Ribicoff, beat the drums with vigor for pet Administration nostrums—ignored or soundly defeated in the last session of Congress.

"Mr. Kennedy was quoted on the back of the program as saying: 'It is important to the cause of good government that the people be well informed on public matters.'

"Who could quarrel with that? But should they be informed solely by Frontier foremen, waving ideological conceits—such as federal 'aid' to education and compulsory medical care for the aged—like branding irons in their hot paternal hands?

* * *

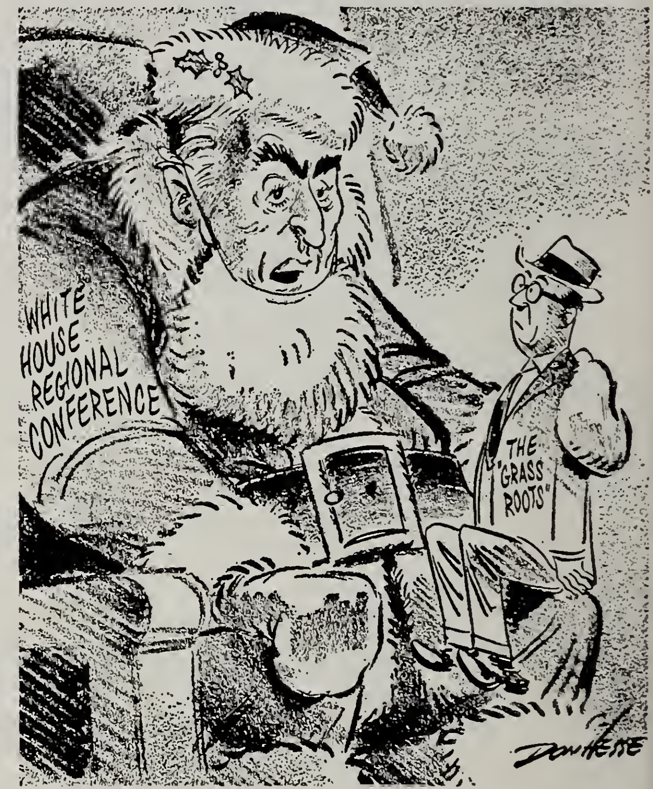
"Mr. Kennedy also went on to observe, 'it is equally important that federal officials seek the views of state and local officials, as well as those of interested individuals, in making plans for future developments.'

"Excellent, a most democratic theory. Only Washington knows full well what officials of states and cities think. If it didn't the Administration need only hang out a query sign. Mayors or governors would jet post-haste to the capital.

"As to getting grassroots advice on its tour of the provinces, the federal troupe showed meager interest. Comparatively few questions were answered.

"Mr. Ribicoff got into an unscheduled debate with a prominent medical man, who ripped into the Frontier scheme for old-age medical panacea.

**'Shut Up—I'll Tell You What You Want!'**



But other doctors, it was reported, failed to get a hearing when Mr. Ribicoff cut this session short by an hour.

* * *

"Commerce Secretary Hodges, apparently added to the cast at the last minute to give some at-

*(Continued on page 10)*

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# Missouri Academy of General Practice

Committees for the ensuing year have been appointed by the President of the Missouri Academy of General Practice, Roy W. Pearse Jr., Nevada. The committees follow:

Advisory Committee: P. C. Hall, M.D., St. Louis, Chairman, and all past presidents.

Mental Health Committee: Cecil G. Leitch, M.D., Blue Springs.

Medico-Legal Committee: C. A. McBurney, M.D., Slater, Chairman; Luke A. Knese, M.D., St. Louis; O. B. Barger, M.D., Harrisonville; William C. Ganley, M.D., Kansas City, and Howard W. Carrington, M.D., Lebanon.

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Finance Committee: C. Gordon Stauffacher, M.D., Sedalia, Chairman; John F. Pearl, M.D., St. Clair, and A. J. Graves, M.D., Mount Vernon.

Nominating Committee: C. G. Leitch, M.D., Blue Springs; P. C. Hall, M.D., St. Louis, and Kenneth Glover, M.D., Mount Vernon.

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## ACROSS MISSOURI

*(Continued from page 8)*

tention to business, offered a glowing account of how the Frontier operation has improved the economy—which in fact was on the mend when the new regime was sworn in at Washington some eight months ago.

"There certainly is nothing wrong with the President of the United States acting to translate his Administration's aims to the people. The executive branch of government should not be isolated.

"But there is a difference between stating facts to the people, even with a clear enunciation of Administration programs, and beating propaganda tom-toms for big-spend schemes of welfare statism in a period when national defense is paramount and enormously costly.

"The traveling company out of Washington for the Regional Conference was packed. It did not achieve a brainwash job, possibly because its effort had been muted. Advance billing brought out heavy criticism, largely by Republicans. No doubt that cramped the show.

"Comgressman Tom Curtis of St. Louis has demanded to know how much these regional sorties are costing taxpayers and who pays the tab—Washington, states or municipalities. This is a most legitimate challenge. We who foot the bill ought to know how and how much.

"We should like a cogent explanation also of why it is necessary to subsidize a traveling stock-company, doing a political Peter Pan with an obvious punch line at the curtain:

" 'Don't you believe in Santa Claus?' "

# How to help your patient stick to a geriatric diet

The secret ingredient in a successful diet is acceptance. Meat is as important for the old as for the young—and every bit as appealing. Chops, fish steaks, chicken parts or cutlets can be bought in small portions. Chopped or strained vegetables not only supply the patient on a geriatric diet with needed vitamins, but are easy to chew. The same is true of easy-to-make, one-dish casseroles. Patients of advanced years enjoy salads because they need no cooking, and canned fruits are an extra convenience for the elderly. Fluid intake should be liberal, of course.

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# Woman's Auxiliary

A Happy New Year to all the Auxiliary family throughout the state. We are indeed proud to announce a new member to our Auxiliary family, the Butler-Wayne-Ripley Auxiliary with Mrs. Cyril A. Post as president. On November 21, Venus Schattyn, our charming and capable president-elect, journeyed to Poplar Bluff for the organization meeting and installation of officers. Sixteen members are in the charter group, with a potential of around forty members. How happy we are to welcome this group, and Venus expressed all our feelings when she said, "I don't need to tell you what a thrill this is for me, and our Auxiliary."

Mrs. Frederick E. Wade

This is the season of the year when we take inventory of the old and plan for the new. The year 1961 was a wonderful year for our Auxiliary. On February 16, our state president, Mrs. Jordan Kelling, spoke to the wives of the Callaway County Medical Society, and they voted to organize. Our first vice-president, Mrs. Robert Stewart, installed the new officers at the organization meeting on March 3 with Mrs. James K. Ritterbusch as president. In November the Southern Medical Association Auxiliary awarded Callaway County the Silver Cup for their outstanding observance of Doctors' Day, and Ruth Kelling reported it was indeed a happy occasion to deliver the trophy, filled with red carnations, to this outstanding Auxiliary.

We are proud indeed of the two new additions to our family in 1961, and we hope that 1962 will bring even greater expansion of our Auxiliary ideals and program. We look forward to the day when every doctor's wife in Missouri will be either a member of a county auxiliary or a member-at-large.

Why should one consider membership with the Auxiliary? I think our Auxiliary membership represents and affirms our support of our husbands in their tremendous task of meeting the obligations and ideals inherent in the practice of medicine. The object of our Auxiliary is to extend the aims of the medical association, and at all times to work under their guidance and direction. Our largest medical society may use Auxiliary assistance to put on a Health Fair, while a smaller Auxiliary may aid by organizing the round-up of school children for physical examinations. Our doctors appreciate that wherever an Auxiliary member is present, they are assured of cooperation and support in furthering programs essential to the health and welfare of their communities.

There are many organizations and clubs that are active in areas of interest to women, but only in our Auxiliary do we find all of these interests combined in one program. Our program is based on friendship and fellowship, and we work together not only to learn but to share with others information and assistance in furthering programs of mental health, legislation, safety, health careers, civil defense, rural health, community service, and financial support of our nation's medical schools through the American Medical Education Foundation.

How can one become a member? A warm welcome awaits all doctors' wives in Missouri. In counties where we do not have, as yet, an organized auxiliary a membership-at-large is available, which means this member's affiliation is directly with our state Auxiliary, and she receives all bulletins and information made available to county presidents. The dues are $2.00 a year, and Mrs. J. K. Ritterbusch, Fulton, is our members-at-large chairman, and will be delighted to hear from any prospective member.

In counties in which there is no auxiliary but the women are interested in organizing one, the process is easy and we are happy to furnish any assistance. The first step is to secure permission of your County Medical Society, and frequently the medical societies reverse the procedure, and ask their wives to organize, because they are already familiar with the value of an organized auxiliary in furthering ideas and programs that will aid them in serving their communities.

After medical society approval has been given the membership chairman, Mrs. Harry Harkness, Burkarth, Route 2, Warrensburg, will furnish

*(Continued on page 79)*

Volume 59, Number 1—January, 1962

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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**O. THERON CLAGETT, M.D.,** *Rochester, Minn.*

# The Treatment of Carcinoma of the Breast: A Controversial Subject

**Data to substantiate the controversy concerning treatment of carcinoma of the breast are presented with discussion of various methods.**

**Dr. Clagett is from the Section of Surgery, Mayo Clinic and Mayo Foundation, Rochester, Minn. The paper was presented as the annual F. G. Thompson Lecture at St. Joseph on May 18, 1961.**

Until quite recently radical mastectomy has been accepted generally as the treatment of choice for carcinoma of the breast by surgeons and physicians throughout the world. During more than 60 years no fundamental changes have been made in the technic or extent of the surgical procedure. With the tremendous advances that have been made recently in the treatment of many other diseases, it was inevitable and highly desirable that doubts would arise as to whether radical mastectomy was in fact the most effective treatment that could be offered to patients with carcinoma of the breast.

The treatment of disease should never become static. It should be reevaluated constantly in the light of new knowledge, new technics and new therapeutic approaches. The management of patients with carcinoma of the breast has now become an extremely controversial subject. Some authorities have suggested that all treatment of carcinoma of the breast has been futile, that it has not altered appreciably the course of the disease and, further, that early diagnosis and treatment have not influenced the results. Others have urged more radical and more extensive operation to include routes of lymphatic spread not included in classic radical mastectomy. Still others contend that simple mastectomy or simple mastectomy plus irradiation provides a more effective treatment for carcinoma of the breast.

Along with these differences of opinion regarding carcinoma of the breast and its treatment, new methods of applying radiation therapy have been developed. Chemotherapy of cancer and its possible application to carcinoma of the breast has aroused interest, and alterations in hormonal environment by a variety of means also have been shown to influence some cases. This present state of affairs makes decisions difficult for those faced with the direct responsibility of giving patients with carcinoma of the breast the best advice and treatment that can be provided. I freely admit that I am not entirely satisfied with the answers that I have; however, I will try to give my personal appraisal of this controversial problem.

Carcinoma of the breast occurs commonly, and, as the average age of the population increases, it is occurring more commonly. Accurate statistical figures for its incidence are not readily available, but it has been estimated that carcinoma of the breast will develop in one of every 40 women. The youngest patient we have seen at the Mayo Clinic was 16 years of age and the oldest, 87 years. The average age of the patients is 52 years, with the largest proportion being between 45 and 55 years of age. However, it would be erroneous to believe that the disease decreases in incidence after 55 years of age. Actually the tendency for carcinoma of the breast to develop increases throughout life and, as the average length of life of the population increases and more women live longer, the incidence of cancer of the breast increases.

For unknown reasons the left breast is affected more frequently than the right; the incidence of cancer of the breast is higher among single women than among married women of the same age; and among married women, the incidence is higher among the childless than among those who have had children. These statistical facts are well established, but there is no certain explanation for them.

Returning to the subject of the treatment of carcinoma of the breast, let me first consider the viewpoint expressed by some that treatment of carcinoma is futile. In 1951 Park and Lees[1] stated that the great variability in the course of carcinoma of the breast in different patients was sufficient to account for the reported differences in variously treated groups, without reference to the type of treatment employed, and, further, that proof had not been established that treatment of any kind had affected the five year survival rate materially. McKinnon,[2] in 1955, stated that evidence that treatment of cancer of the breast prevents death in a considerable number of cases and that early treatment is effective should be rejected. These authors offered statistical data which, in their opinion, supported their viewpoint. All students of this disease will agree that the course of carcinoma of the breast is varied and unpredictable in the individual case. It is recognized, too, that some patients having untreated carcinoma of the breast live for many years. All have encountered such cases. Daland[3] reported that 22 per cent of untreated patients live five years and 5 per cent live 10 years. However, the average length of life after diagnosis of untreated carcinoma of the breast is only three years and eight months. Certainly the length of life of patients treated by mastectomy averages far more than that. It must be granted that mastectomy has failed to cure many patients with carcinoma of the breast. However, we have been able to lengthen substantially the life and comfort of our patients by our surgical efforts, and after all, that is the primary goal of most of our efforts in treating disease.

It is ridiculous to state, as McKinnon[2] has stated, that earlier diagnosis of carcinoma of the breast has not materially influenced the results of treatment. During the years 1910 through 1954, 9,649 women with unilateral carcinoma of the breast were treated by mastectomy at the Mayo Clinic.[4] Radical mastectomy was performed in 9,477 cases, and simple mastectomy in 172 cases. During these 45 years of experience the proportion of patients with axillary involvement has decreased from about 70 per cent to about 47 per cent of those who undergo operation. This decrease can be explained only by earlier diagnosis. Since the survival rate for patients without involved axillary nodes is approximately twice that of patients with positive axillary nodes, it inevitably follows that earlier diagnosis and treatment are being accomplished and are accompanied by improved survival rates of considerable significance.

The over-all five year survival rate for 1910 through 1924 is 40.1 per cent. In the most recent period, 1950 through 1954, it has increased to 65.1 per cent. The five year survival rate for patients with axillary nodal involvement has improved from 25.6 per cent for 1910 through 1924 to 46.4 per cent for 1950 through 1954. The five year survival rate for patients without axillary nodal involvement has increased from 70 per cent for 1910 through 1924 to 83 per cent for 1950 through 1954. This figure of 83 per cent for five year survival of patients without nodal involvement treated by radical mastectomy should be compared with the normal survival rate for women in this age group, which is 92 per cent. We are not accustomed to a survival rate of this magnitude in dealing with cancer, but it has been accomplished with carcinoma of the breast. While in almost half the patients mammary carcinoma still is not discovered at a stage that permits such a favorable prognosis, it should be remembered that not long ago the group with axillary nodes was much larger; with continued effort we hope and expect that it will be much smaller.

These results do not warrant complacency or satisfaction with our efforts, but they do indicate that considerable progress has been made. A major share of this progress must be credited to the efforts that have been made to educate women to seek early treatment of nodules in the breasts. The evidence clearly refutes opinions and statements that early diagnosis of malignant disease does not influence results and that treatment is ineffective. There is a vast difference between a five year survival rate of 22 per cent for untreated patients having carcinoma of the breast and a survival rate of 65 per cent for those treated by radical mastectomy.

In some instances of conventional radical mastectomy, residual carcinoma remains in the internal mammary gland and, to a lesser extent, in the supraclavicular lymph nodes. Some studies indicate that the internal mammary nodes are involved with metastatic carcinoma in 35 per cent of medially or centrally located carcinoma of the breast and occasionally in laterally located lesions. Supraclavicular nodes also may be involved in from 20 to 30 per cent of cases with axillary nodal involvement. It is indeed tempting to all surgeons to consider the possibility of extending radical mastectomy to include these relatively common regions of lymph node metastasis, and it is not surprising that some surgeons, notably Urban[5] and Wangensteen,[6] have explored the possibilities of super-radical operations for carcinoma of the breast.

Urban[5] reported 300 cases of medially or centrally located carcinoma of the breast treated by radical mastectomy and dissection of the internal mammary lymph nodes. In 44 per cent of the patients the lymph nodes were not involved; in 48 per cent metastasis extended to the axillary nodes, and in 35 per cent internal mammary lymph nodes were involved. The five year survival rate in 100 consecutive patients having carcinoma of the breast treated by the more radical operation was 67 per cent. Urban[5] stated that this figure is 12 per cent higher than the survival rate anticipated for similar patients who underwent radical mastectomy and postoperative x-ray therapy. Urban has offered a persuasive plea for extended radical mastectomy, and he has accomplished his operations with commendable low mortality and morbidity rates. However, it would seem unlikely that this super-radical operation could be done by most surgeons without considerable increase in mortality and morbidity. Certainly it will be necessary for more patients to be operated on and followed for a longer time before a final evaluation can be made. It should be pointed out, too, that at the Mayo Clinic we have had a five year survival rate of 65 per cent for our patients treated by classic radical mastectomy, as compared to Urban's survival rate of 67 per cent with extended radical mastectomy.

Wangensteen[6] has included the supraclavicular lymph nodes, as well as the internal mammary lymph nodes, in the super-radical operation which he has developed. In a rather small series of cases this procedure entailed a mortality rate of 13 per cent. I am sure all can agree that a surgical mortality rate of this magnitude is prohibitive. In considering the question of extending the limits of surgical procedures for carcinoma of the breast, the conscientious surgeon must weigh the morbidity and mortality rates and the disability incurred with the procedure, as well as the survival rate he hopes to achieve. Urban, Wangensteen and others are exploring the potentialities of more radical operations for carcinoma of the breast. Other surgeons should not be encouraged to perform these procedures until these men can show conclusively, with a large number of cases followed over a longer period, that these operations will materially improve results without increasing the risk of operation or disability after operation. Personally, I doubt if super-radical breast operations will accomplish enough benefits to justify them. I believe that further improvement in the results of treating carcinoma of the breast will come from some direction other than more radical operation.

Some surgeons have proposed simple mastectomy for treatment of carcinoma of the breast, supporting this viewpoint with the argument that if the axillary lymph nodes are not involved, simple mastectomy is adequate treatment, and that if axillary lymph nodes are involved, the prognosis is hopeless anyway. I cannot accept such arguments. In the first place, it is impossible for any surgeon to determine whether or not nodes are involved. The nodes must be removed and examined by the pathologist before this can be determined. Nodes will be involved in almost 50 per cent of cases. In the second place, axillary nodal involvement does not mean a hopeless prognosis. Even with axillary nodal involvement our five year survival figures have increased from 25 per cent in the group treated in the period 1910 through 1924 to 46 per cent in the group treated in 1950 through 1954. This increase must indicate a less advanced degree of axillary metastasis and fewer patients having metastasis advanced beyond the axilla. No important alteration has been made in the operation performed during these years. The percentage of patients considered inoperable has decreased steadily during these years. The improved rates can result only from earlier diagnosis and treatment. This experience clearly refutes the argument that removal of metastatic axillary lymph nodes is useless.

Probably the strongest challenge to the position of classical radical mastectomy for the treatment of carcinoma of the breast has come from advocates of simple mastectomy and irradiation. This method of treatment was developed and advocated by McWhirter[7] in Edinburgh. His experiment with this method was begun in 1941, and he developed a plausible-sounding case for his position that simple mastectomy and irradiation provided better results than radical mastectomy for the treatment of carcinoma of the breast. He gained considerable support for his viewpoint in various parts of the world. In his early reports not enough patients had been treated by his method and follow-up had not been long enough to permit an accurate evaluation of his results or a comparison of them with the results accomplished by other means of treatment. In 1955, however, McWhirter[8] presented a report on 1,882 patients who had undergone his method of treatment from 1941 through 1947. He had traced 100 per cent of his cases, and five year and 10 year survival rates were computed. It is to be regretted that in this bold and well executed experiment McWhirter did not take advantage of the opportunity to carry out a controlled experiment, comparing the results of simple mastectomy and radiation with those of radical mastectomy. Since he did not do this, our only recourse is to compare his results as best we can with the results we have obtained with radical mastectomy.

It is essential to know what is the better treatment. During the years 1941 through 1947, the same years as McWhirter's study, 1,900 patients were treated by radical mastectomy at the Mayo Clinic. We had a 99+ per cent follow-up of our cases. It is fully recognized that it is impossible to compare with complete accuracy a series of patients in Scotland treated by one method with a series of patients in the United States treated by another method. However, it does not seem unreasonable to compare McWhirter's reported experience with ours at the clinic.

The two series are of almost equal size. They cover the same period. Both have practically 100 per cent follow-up. In computing survival rates all deaths are attributed to carcinoma. The average age of the patients was approximately the same. McWhirter reported that 15 per cent of his patients had distant metastasis when first seen. In the clinic series 16 per cent had distant metastasis. In both series a standard policy of treatment was maintained, and an essentially uniform technical procedure was used. Although we do not have a controlled experiment, the two experiences are remarkably well arranged for comparison. If patients with known distant metastasis are deducted from each series, there remain 1,609 patients in McWhirter's series and 1,900 in the clinic series. The five year survival rate for patients treated under McWhirter's policy of simple mastectomy and irradiation was 48.1 per cent, while the rate for patients treated under a policy of radical mastectomy was 59.3 per cent. It is apparent that the comparison is favorable to radical mastectomy by more than 10 patients per 100 operated on, or an increase of more than 20 per cent over survival achieved by simple mastectomy.

If one compares McWhirter's series with the clinic series for the years 1948 through 1950, the advantage is even greater, with a survival rate of about 15 per 100 patients treated by radical mastectomy. If patients with distant metastasis in both series are included and the series are compared, patients treated under a policy of radical mastectomy, when possible, have a better survival rate, 20 per cent. It seems quite clear that radical mastectomy provides more effective treatment of carcinoma of the breast than can be accomplished by simple mastectomy and irradiation.

Another factor involved in the policy of simple mastectomy and irradiation, that is not reflected in the survival rates but which is important insofar as the patient is concerned, is the radiation morbidity that it incurs. In one reported series of 673 patients treated by McWhirter there were 47 cases of serious radiation damage with pathologic fractures of ribs, clavicle or humerus, and three cases in which amputation of the arm was required. Radiation fibrosis of the lung and other lesser manifestations of radiation effects are difficult to assess, but are not negligible. Radiation therapy as practiced by McWhirter is not a conservative procedure.

It should be pointed out, too, that the better results provided by radical mastectomy rather than simple mastectomy in the treatment of carcinoma of the breast accomplished at the Mayo Clinic are not unique and cannot be attributed to selection of favorable cases for this operation. Similar results supporting radical mastectomy have been reported by Ryan and associates[9] and by Watson.[10] Their studies concerned all patients with carcinoma of the breast treated in the State of Connecticut and the Province of Saskatchewan, respectively, and certainly cannot be considered as selected groups.

We are indebted to McWhirter for having stimulated a great deal of controversy about and interest in the treatment of carcinoma of the breast. Unfortunately, his efforts have not provided a more effective treatment for carcinoma of the breast. There is no valid evidence to support the concept that simple mastectomy or simple mastectomy plus irradiation provides as effective treatment of carcinoma of the breast as is provided by classic radical mastectomy.

It would be impossible at this time to review all the various aspects of the treatment of carcinoma of the breast and its metastasis by the numerous methods of altering hormonal environment. This is, indeed, a controversial and poorly understood subject. There is no question that in some instances the course of carcinomas of the breast can be influenced favorably by the use of hormones. In other cases that seem identical, the lesions are unaffected or even seem to be stimulated by alteration of the hormonal environment. Personally, I believe that a premenopausal woman with cancer of the breast should be advised to have oophorectomy if the axillary nodes are involved. Occasionally I perform oophorectomy and radical mastectomy at the same operation in such patients. There is increasing evidence that this is worth while. Certainly the patient who has carcinoma of the breast should not become pregnant. I realize that women who have had cancer of the breast have had children subsequently without serious difficulty; however, the risk of the cancer recurring and spreading is so great that pregnancy is not justifiable.

There is no question but that bilateral adrenalectomy and hypophysectomy have provided remarkable remissions in some patients with metastatic carcinoma of the breast. However, the results are unpredictable; either procedure is a formidable undertaking carrying some risk, and both result in metabolic disturbances that require constant attention and treatment for the rest of the patient's life. Clear indications for the use of these procedures have not been defined as yet. Remissions in some instances of metastatic carcinoma of the breast can be accomplished by altering hormonal environment with the administration of estrogens, androgens or cortisone. Again, the indications for these hormones are not entirely clear as yet. Obviously, none of the various means of altering hormonal balance provide really effective means of treating carcinoma of the breast and related metastasis. Their influence, however, does provide some clues regarding carcinoma of the breast and its behavior and may lead to better understanding and more effective treatment of this disease.

Recently evidence has accumulated indicating that the chemotherapy of carcinoma of the breast may offer real benefit. Moore[11] has reported on cooperative studies performed under the direction of the National Committee on Adjuvant Chemotherapy using thio-tepa in conjunction with radical mastectomy. Of the premenopausal women treated with thio-tepa, 95 per cent were free of metastasis in 26 months, while only 46 per cent of the control series were free of disease. Of the postmenopausal women treated with thio-tepa, 89 per cent were free of disease in 26 months, as compared to 66 per cent of the controls. Of all patients with axillary nodal involvement treated with thio-tepa, 80 per cent were free of disease, and only 40 per cent of the controls were free of disease. The experience reported is small and follow-up is short; however, the results thus far are encouraging. It must be emphasized that thio-tepa is an alkylating agent and a powerful systemic poison. It should not be used casually or lightly. Its long-term toxic effects are not known.

I should like to touch briefly on a few technical aspects of radical mastectomy. It should be pointed out clearly that there is no evidence that details of surgical technic or surgical virtuosity have much, if any, influence on the results of radical mastectomy. The surgical literature on carcinoma of the breast has placed too much emphasis on these details. For instance, there is no particular merit in a certain type of incision. The incision used for radical mastectomy should not be standardized, but should vary with the location of the tumor, the size and shape of the breast, and other variable factors. Skin flaps should be thin, but nothing useful is accomplished by removing every vestige of fat from the skin flaps as some have advocated. Skin grafts should be used when necessary, but it is not necessary or beneficial to remove so much skin that a graft is required in every case. Radical mastectomy should be performed deliberately and with meticulous, gentle technic, but the results are determined by what the surgeon does and not by the amount of time spent doing it. There is no reasonable excuse for subjecting a patient with carcinoma of the breast to a five or six hour operation. Hypotensive anesthesia has been helpful in facilitating the dissection and in reducing the loss of blood during radical mastectomy in my experience, but it should not be used in poor-risk patients. The premenopausal patient with axillary nodal involvement should have oophorectomy. Postoperative radiation therapy probably should be carried out in patients with axillary nodal involvement. However, evidence that it accomplishes a great deal for the patient is not particularly convincing.

The treatment of carcinoma of the breast is a controversial subject. I realize the inadequacies of radical mastectomy as well as anyone. I want methods of treatment that are better and more effective than radical mastectomy as much as anyone, and I hope that when more effective treatment becomes available I will be among the first to recognize it and use it. I thoroughly approve of the dissatisfaction with radical mastectomy that is apparent. It is always a healthy thing to be dissatisfied and to seek something better. However, in my opinion, at the present time classic, radical mastectomy still provides the most effective treatment that can be offered to patients with carcinoma of the breast. Hormone therapy, chemotherapy and irradiation may be added to radical mastectomy under appropriate circumstances. Efforts to treat patients having carcinoma of the breast by simple mastectomy or any other abbreviation of classic, radical mastectomy is a backward step and should be condemned.

Mayo Clinic

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# Resolutions of Farm Bureau Federation

Among resolutions adopted by the Missouri Farm Bureau Federation in November, 1961, according to the *Missouri Farm Bureau News*, were the following:

### HEALTH

We commend the State Division of Health on its continued efforts to improve the health of rural and urban people.

We believe the licensed nursing home law has made it possible for our aging population to have better and safer care. We urge that this law be extended for the inspection of unlicensed boarding homes where three or more people over the age of 65 reside.

Legislation is needed to establish regulations and standards for the uniform inspection of all retail food establishments in Missouri. These regulations are needed to protect the people from unwholesome food and unsanitary practices.

We recommend increased appropriations in order that the State Division of Health may secure adequate personnel for the implementation of such a program.

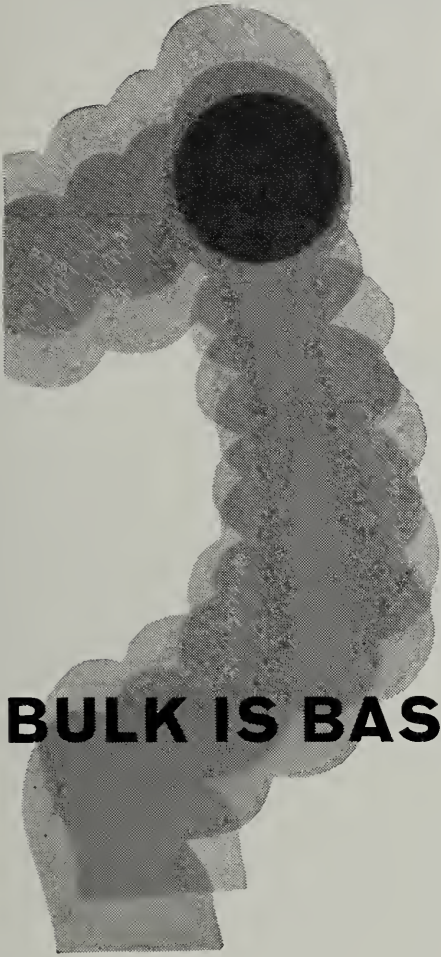
We support continued medical research embracing all phases of human health. We urge parent education regarding immunization, in order that crippling diseases of children may be prevented or held to a minimum.

### SOCIAL SECURITY

Social Security programs should still be designed to supplement rather than replace individual thrift and responsibility.

We, therefore, oppose the practice of continued liberalization of social security benefits which will make it a financial burden.

We believe that private insurance programs should be used to provide medical insurance rather than through any governmental agency.



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[1] Sollmann, T.: A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology, ed. 8, Philadelphia, W. B. Saunders Company, 1957, p. 206.

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HARRY C. WALL, M.D.; DAVID S. DANN, M.D.;
SIDNEY RUBIN, M.D., and ARTHUR ADELMAN, M.D., *Kansas City*

# Elevated Transaminase Values in Compartmental Disease of the Gallbladder

## *A Case Report*

A CASE OF UPPER abdomen and chest pain associated with a diseased gallbladder is reported. The misleading transaminase elevation reemphasizes the pitfall of considering the rising serum transaminase as purely a reflection of myocardial infarction.

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**A case is reported which emphasizes the importance of excluding biliary disease as an explanation for the elevated SCOT levels.**

**Dr. Wall is from the Department of Medicine; Drs. Dann and Rubin from the Department of Radiology, and Dr. Adelman from the Department of Surgery, Menorah Medical Center, Kansas City.**

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### CASE REPORT

Mrs. J. S., a 56 year old white female, had a medical history that antedated this present admission approximately 18 years. She vaguely recollected some intestinal symptoms that were associated with epigastric discomfort and occasional chest pain. For the last 10 years, she complained of pain in her left shoulder and arm lasting from five to 10 minutes. The pain was relieved by heat and was not initiated by effort or necessarily related to abdominal distress. The only other pertinent clinical findings was that related to her history of hypertension dating back to 1952. The blood pressure varied between 190/110 to 220/130. With use of chlorothiazide and ganglionic blocking agents, the blood pressure was controlled between 130/90 to 160/100. A gallbladder study had been made in 1952 and was considered normal. A calcific density was observed at that time in the right upper quadrant and had been considered to represent a mesenteric gland.

Since her initial complaint, there had been numerous abdominal attacks described as upper abdominal distress and periumbilical pain. The pain frequently radiated to the back in the region of the dorso-lumbar spine and below the right scapula. Accompanying these attacks, there were periods of gaseous indigestion relieved by belching.

The present attack began April 26, 1959, when she suffered from right costovertebral pain which awakened her at 2:00 o'clock in the morning. The pain lasted about 15 minutes and subsided, only to recur at 5:00 a.m. the same day. The recurrent attack of pain was periumbilical and accompanied by gas and belching. Thirty-six hours later she had severe umbilical pain that radiated to the right upper quadrant and mid-chest, localizing around the substernal area. There was no nausea or sweating with any of these episodes. The attack lasted 45 minutes and subsided without the use of demerol or morphine.

The physical examination revealed some localized tenderness in the epigastrium and below the right costal margin. The blood pressure was 160/190. The laboratory studies were as follow: Hemoglobin 14.4 gms.; Hct. 40; white blood cells 10,050 with 71 segmented, 5 stem, 22 leukocytes and 1 monocyte; specific gravity of urine 1.005; albumin and sugar negative. On April 27, the SGOT was 199 while the SGPT was 71. The enzyme determinations finally returned to normal levels in two days. The electrocardiogram was normal (fig. 1). The liver function studies were not significant. On April 28,

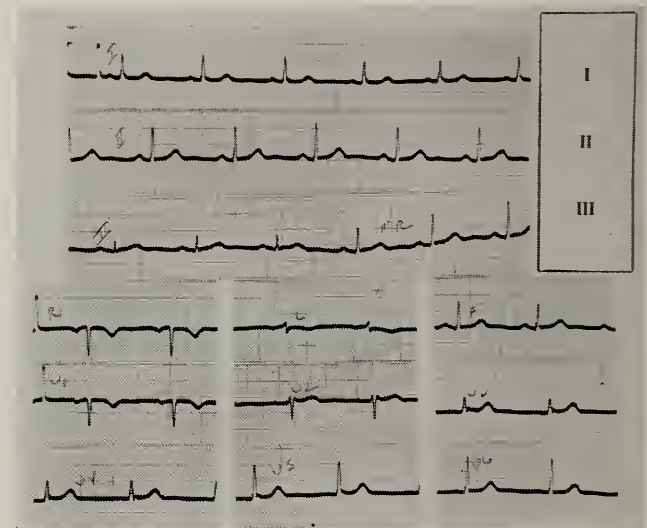

**Fig. 1. Normal heart tracing.**

the bilirubin was 0.6; alkaline phosphatase (Bessery Lowry) 2.6 (normal 2.3). On April 30 the serum lipase was 280, cholesterol 336.

*Roentgen and Clinical Observations.*—The flat plate of the abdomen revealed an irregular nonlaminated calcific density lying in the right upper quadrant. An oral study consisting of an initial six telepaque dose was adequate in demonstrating an apparently normal functioning gallbladder. In a superficial study, the calcific shadow appeared to lie just inferior to the gallbladder and was separated from it by 1 centimeter of normal tissue density (fig. 2). No dye was observed in the area about the stone. Multiple roentgenograms were taken with the patient in varying positions and the relationship of the calcification remained constant to the dye containing gallbladder shadow. This was true of the lateral decubitus as well as the upright films.

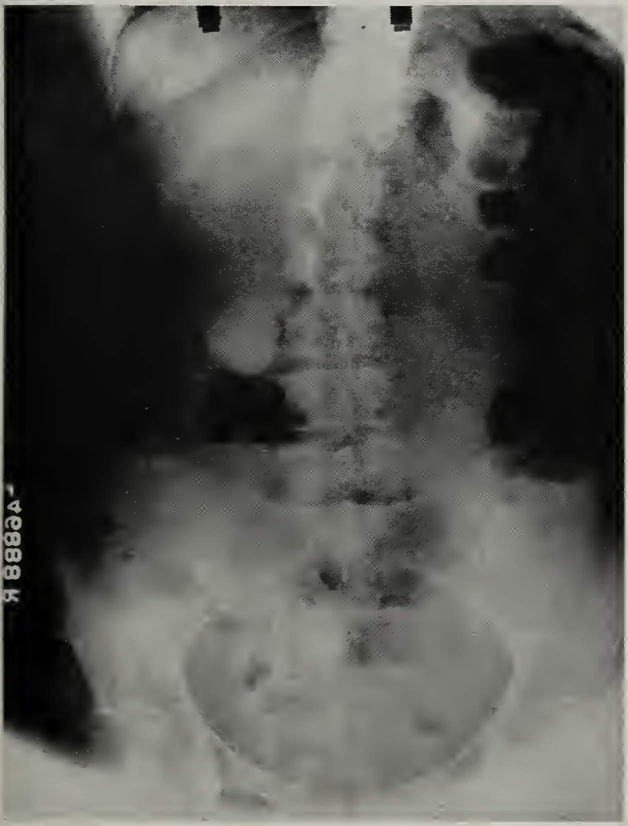

**Fig. 2. The gallbladder appears to be well outlined by the opaque dye. Just inferior to the dense shadow of the gallbladder is a calcific density. This density is approximate but separate from the dye filled gallbladder.**

Closer scrutiny of the upright film (fig. 3) suggested a soft tissue outline which could be seen surrounding the stone. In addition, a minimal but definite convexity was observed on the fundus of the functioning gallbladder as if produced by extrinsic pressure. A fatty meal film revealed the relationship to remain constant between the calculus and the normal contracting dye-filled gallbladder. The functioning part of the gallbladder contracted approximately to 50 per cent of normal. After the fatty meal, the patient had a severe attack of abdominal pain with nausea and vomiting. This attack required narcotics for relief.

These findings suggested to us that we were dealing with a nonfunctioning congenital fundal end of the gallbladder that was occluded by a portion of the stone or by a septum. The thickened wall supported this contention and emphasized the diseased nature of the non-functioning portion of the gallbladder.

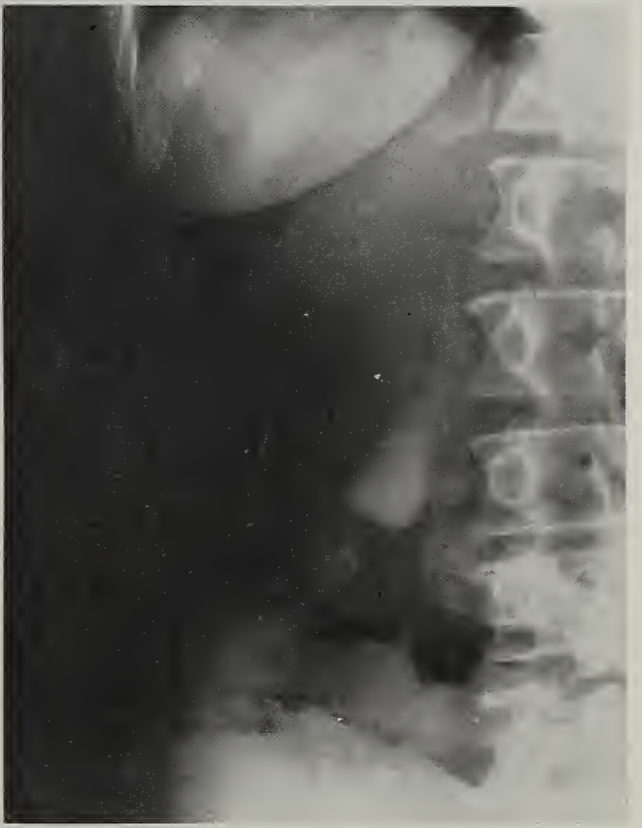

**Fig. 3. Upright film reveals soft tissue density about calculus and contiguous position of density to gallbladder shadow.**

On May 19, the patient was operated on for gallbladder disease after excluding acute myocardial infarction. At surgery, a compartmental gallbladder was found with a normal proximal functioning mucosa and a diseased distal end (fig. 4). The liver was grossly normal. The bile duct was slightly dilated and a cholangiogram revealed no obstruction with dye passing readily into the duodenum. The pancreas appeared grossly normal. Prior to surgery, on May 15, alkaline phosphatase was 0.8; serum cholesterol 234; bilirubin 0.55.

After surgery, she had several attacks of atypical chest pain. On May 25, she had two attacks of anterior chest pain and required 75 mg. of demorol for relief on each occasion. On May 26, she had an attack of periumbilical pain that radiated to the back. The electrocardiograms taken afterward were unchanged and were still normal.

Since discharge from the hospital she has been free of abdominal and chest pain and her previous attacks of abdominal distress and gaseous indigestion have completely disappeared.

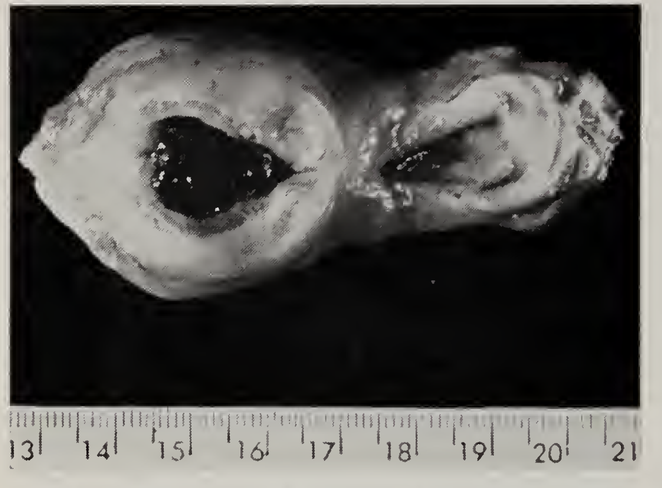

**Fig. 4. Reveals compartment of gallbladder containing calculus.**

On May 18, alkaline phosphatase was 0.8, cholesterol 234, bilirubin .55.

| | *Serum Amylase* | SGOT | SGPT |
|---|---|---|---|
| May 25 | 192 | 83 | 25 |
| May 26 | | 68 | 26 |
| May 27 | | 293 | 156 |

## Discussion

The normal electrocardiograms and the positive roentgen findings assured us that the patient's symptoms were due to biliary tract disease. However, the abnormal enzymatic studies were disconcerting. In retrospect, the markedly SGOT and SGPT plus slight elevation of alkaline phosphatase, cholesterol and lipase suggest a mild pancreatitis and a transient obstruction of the common bile duct.

Sherry[1] has shown experimentally that ligation of the common duct in a rat results in a sharp rise of serum levels in SGOT and SGPT. The SGOT increased to a much greater degree than the SGPT and reached a peak in six hours after ligation and even if the ligation was continued, the SGPT became normal and SGOT receded but not to a normal level. He also showed an extra hepatic obstructing jaundice secondary to stones; SGOT and SGPT may be elevated but there was a tendency of SGPT to exceed the SGOT. Mossberg,[2] too, has demonstrated that 15 mg. of morphine given subcutaneously to an asymptomatic subject with gallbladder disease can cause a considerable rise in SGOT and alkaline phosphatase. In 67 per cent of the patients with cholecystectomy and 50 per cent of patients with nonfunctioning gallbladder, the SGOT reached a peak in five to eight hours and persisted for at least 24 hours. The SGOT levels varied from 94 to 903 units and the alkaline phosphatase levels (Bessery Lowry) reached a peak of from 4.4 to 7.7 units. Neither SGOT nor alkaline phosphatase were elevated by morphine in subjects with normal cholecystograms or in subjects with gall stones in visualizing gallbladders. He concluded that one should be cautious about using elevated SGOT levels to confirm the diagnosis of myocardial infarction in patients without a gallbladder or with a nonfunctioning gallbladder who have recently received narcotics.

## Summary

A diseased gallbladder was elusive to diagnosis because of a bizarre isolated calculus contained within a nonfunctioning congenital Phrygian cap while the remainder of the gallbladder functioned normally.

The roentgen findings suggesting the correct diagnosis are discussed along with the disconcerting enzyme studies.

It is emphasized that elevated SGOT levels may falsely suggest a diagnosis of myocardial infarction, whereas, biliary tract disease is an important and often overlooked cause of extracardial serum transaminase elevation.

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**WALDO S. HOLT, M.D.,** *and*
**G. KEITH KENNARD, M.D.,** *Kansas City*

# Adenoma of Brunner's Glands

## *A Case Report*

Tumors of the duodenum are extremely rare. According to River, et al.,[1] of 1,399 benign neoplasms of the small bowel, 198 were located in the duodenum. Almost one half of these tumors give rise to symptoms because of hemorrhage, obstruction or intussusception.

In 1688, Brunner[2] first published a description of the mucous secreting glands of the first and second portions of the duodenum, which have since been named after him. These are said to occur in all mammals[3] and secrete a viscous juice, the main function of which is protection of the duodenal mucosa from the acid gastric chyme. There has been no conclusive evidence presented that these glands secrete any enzymes. As with all such mucous glands, they are subject to either hyperplasia or adenoma formation.

**A case of adenoma of Brunner's glands of the duodenum, mistakenly diagnosed and treated originally as duodenal ulcer, is reported.**

**Dr. Holt is from the Medical Service and Dr. Kennard is from the Surgical Service of St. Mary's Hospital, Kansas City.**

Less than 100 cases of adenoma of Brunner's glands have been reported to date. Stephens and Harbrecht[4] in 1958 reviewed the literature and added their own case which they believed to be the 73rd such tumor recorded. We have been able to find reports of at least five other cases which, with our case, bring the total number to approximately 80.[5, 6, 7, 8, 9]

### Case Report

The patient was a 38 year old white male, who was admitted to St. Mary's Hospital in Kansas City, Missouri, on February 24, 1961. The patient was admitted as an emergency because of a fainting spell which he had had in the home. He stated that he had felt well until two days prior to admission when he noted aching across the upper back associated with a feeling of generalized weakness. He had one large tarry stool the day prior to admission, but he attributed this to something that he had eaten. The patient had always been in good health previously, and had never had a diagnosis of ulcer or other gastrointestinal disease. He had had no previous x-rays of the gastrointestinal tract. The family history and the past history were noncontributory.

The patient was acutely ill when first seen. He was pale and dehydrated. The remainder of the physical examination was normal, with the exception of the pulse rate which was 100. The initial hematocrit was 18 vpc. and the hemoglobin was 6.6 gms. The white blood count and the differential were within normal limits. The most likely diagnosis was felt to be gastrointestinal bleeding from an undiagnosed duodenal ulcer. During the first 24 hours in the hospital the patient received six pints of blood and other intravenous fluids to correct the dehydration. He was placed on the usual ulcer diet, which included small amounts of a milk and cream mixture every hour on the hour and an antacid and an antispasmodic medication. During the next three days the patient had several tarry stools which were positive for blood, and after that his stools returned to the normal color. The next day (February 25) the hemoglobin was 12.3 gms. and the hematocrit was 34 vpc.

The patient at no time complained of any abdominal pain or discomfort. Prior to his discharge from the hospital an upper gastrointestinal series was performed and reported as follows: "The esophagus shows no abnormality, barium passing readily into the stomach. The duodenal cap remains rather distended throughout the study, and the cap is rather more posterior than usually observed. There is a distortion from the superior margin of the distal cap, consistent with ulceration. There is rather rapid transit of barium in the small bowel with the stomach empty in one hour. Barium well down in the lower ileum. Impression: active duodenal ulcer." Barium enema gave normal findings.

The patient was discharged from the hospital on the eighth hospital day on an ulcer diet and antacids. The patient was seen in the office on two subsequent occasions and he was asymptomatic. He was having no abdominal pain and had noted no tarry stools.

The second admission to the hospital, on May 14, 1961, was for the purpose of a follow-up gastrointestinal series. Routine laboratory studies were within normal limits. The follow-up gastrointestinal series was reported as follows: "This repeat study of the upper gastrointestinal tract continues to show a deformity of the duodenal cap with a movable tumor from the duodenal cap extending down into the second portion of the duodenum. With the prolapse of this tumor into the second portion of the duodenum, the deformity of the cap could be produced by the pedicle of the tumor. The esophagus and stomach show no abnormality. There is normal emptying of the stomach and normal transit of barium in the small bowel. Impression: polypoid type of tumor lying in the duodenal cap and prolapsing into the second portion of the duodenum on some studies. The density of this tumor is almost identical to the density of air and from its size the possibility of a lipoma is suggested (figs. 1 and 2).

The patient was seen in surgical consultation by one of us (G.K.K.) who advised exploration of this tumor mass. Preoperative diagnoses entertained were either lipoma or leiomyoma.

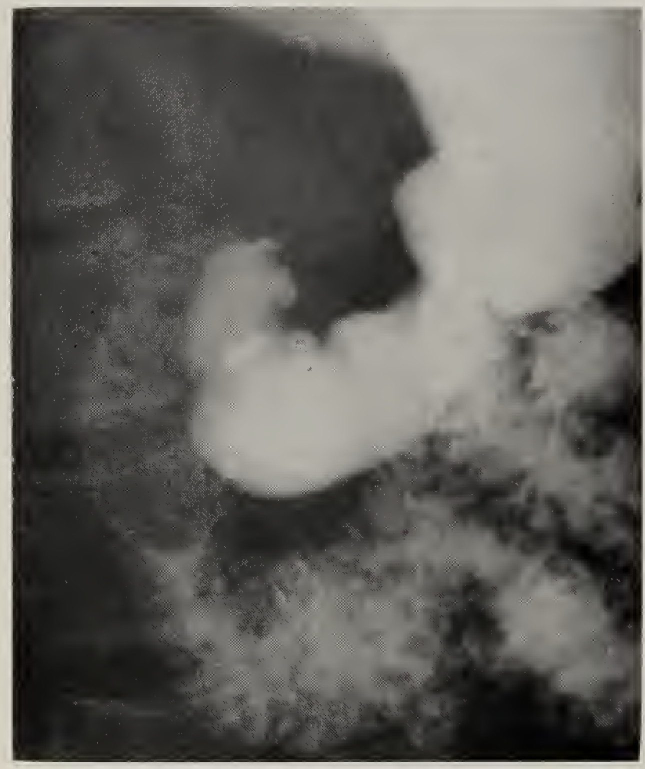

**Fig. 1. Arrow points to translucent mass which was the tumor.**

At operation, May 17, 1961, with the patient in the supine position, under general anesthesia (endotracheal), a right subcostal incision was made, transecting the right rectus muscle. Exploration of the abdomen was normal except for the presence of a tumor in the first portion of the duodenum. This was soft, not fixed to surrounding structures and could be partially moved into the second part of the duodenum, within the bowel lumen. Traction sutures were placed in the anterior duodenal wall and a longitudinal duodenotomy incision made, about 3.0 cm. in length. The tumor was easily prolapsed through this incision and appeared as a large soft, encapsulated submucosal mass on a pseudo-pedicle of normal mucous membrane. It seemed to arise from the posterior and superior duodenal wall, just distal to the pyloric ring (figs. 3 and 4).

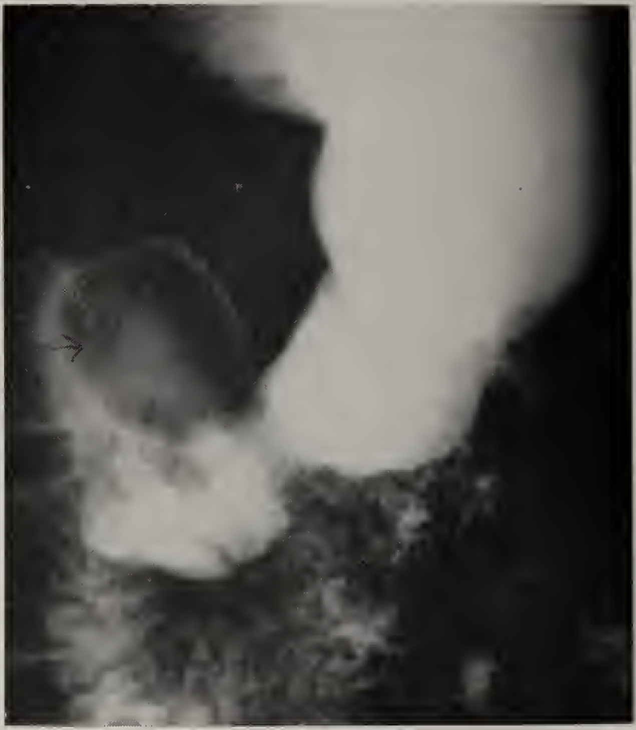

**Fig. 2. Arrow points to another view of the translucent mass.**

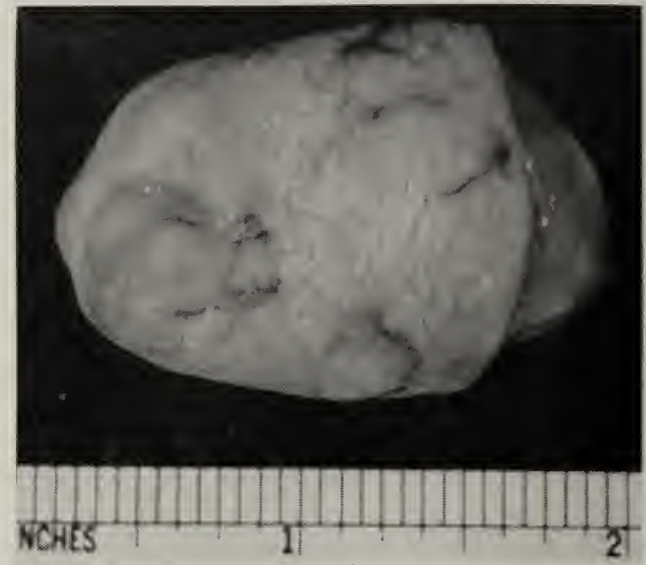

**Fig. 3. Photograph of the tumor removed in toto.**

The pedicle was clamped across below the tumor, and the lesion removed. The pedicle was then sutured with a double row of chromic catgut, and allowed to retract. The duodenotomy was closed transversely, and the abdominal wall closed in layers leaving a soft rubber drain with one end in the re-

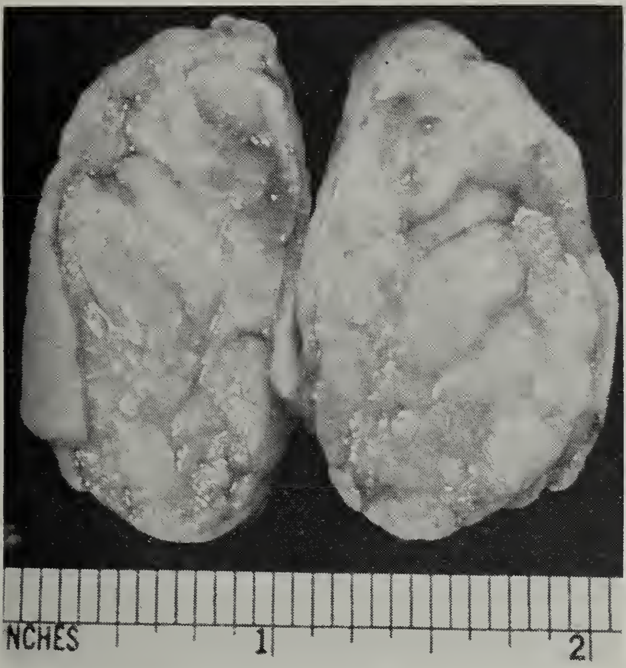

Fig. 4. Photograph of same tumor cut in half.

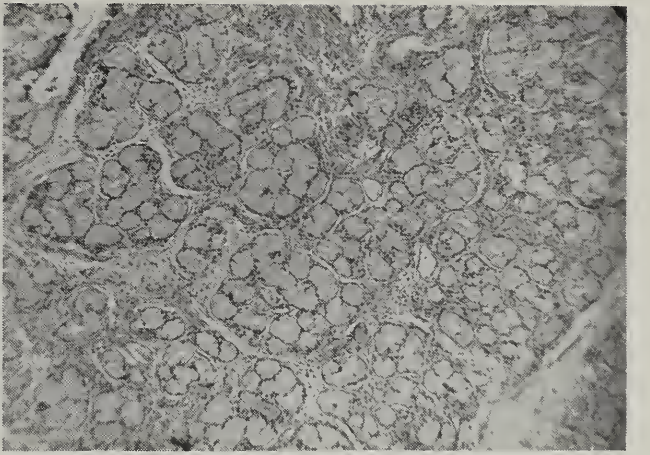

Fig. 5. High power examination of tumor.

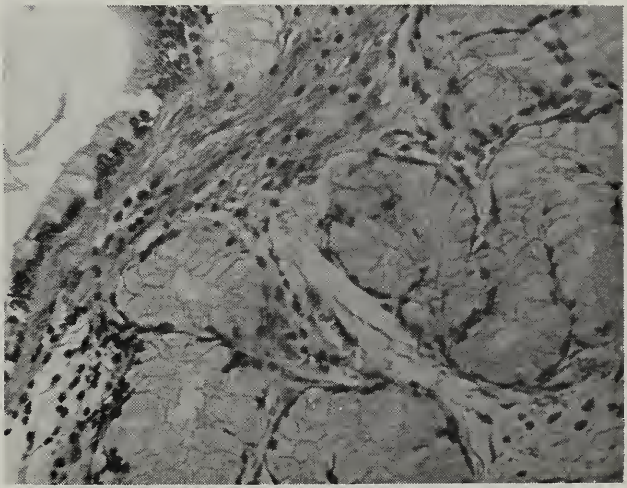

Fig. 6. Higher power examination of tumor.

gion of the duodenotomy, bringing it out the lateral end of the incision.

The postoperative course was entirely uneventful, and the patient was dismissed on the tenth postoperative day.

Gross pathology report was as follows: "This is an irregular ovoid 4 cm. in length and 2 cm. in average width, two thirds of which is covered by duodenal mucosa. The other one third, which is represented by one pole, has a fairly nodular, smooth surface over which a faint trace of blood vessels is evident."

Microscopic examination was as follows: "Sections show a fragment of duodenum containing in the submucosa a large, circumscribed, but encapsulated nodule made up of mucous glands and their ducts. These glands are histologically identical to, and continuous with Brunner's glands. In the histologic section studied, the tumor is covered by intact mucosa. A few aggregates of lymphocytes are present in the tumor. The cells making up the mucous glands of the lesion show no atypical features. Diagnosis: Adenoma of Brunner's glands" (figs. 5 and 6).

## COMMENT

It is necessary to differentiate true adenomata from either localized or diffuse hyperplasia[10] of Brunner's glands. A discussion as to the distinction between these entities is beyond the scope of this paper. However, we feel that the tumor in our patient must be classified as a true adenoma, on the basis of size, and the localized, encapsulated character of the lesion.

An adenoma of this type may mimic duodenal ulcer in symptomatology, especially in regard to episodes of repeated bleeding, and even to the incorrect radiologic diagnosis of ulcer. These circumstances were found in several of the cases reviewed, and were true of our case.

## SUMMARY

A case of adenoma of Brunner's glands of the duodenum, which was mistakenly diagnosed and treated as a duodenal ulcer, is presented. Though tumors of the small intestine are rare, it is important to consider them in the differential diagnosis of gastrointestinal bleeding.

The authors wish to express their gratitude to Angelo Lapi, M.D., Head of the Department of Pathology at St. Mary's Hospital, for helpful suggestions regarding this report.

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*(Continued on page 79)*

GUY N. MAGNESS, M.D., *University City*

# A.M.A. Clinical Session

## *Special Article*

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**Proceedings of the House of Delegates and the session of the A.M.A. held at Denver, Colo., Nov. 26 to 30, 1961, with Missouri Delegates H. E. Petersen, M.D., St. Joseph; Richard H. Kiene, M.D., Kansas City; Arthur W. Neilson, M.D., St. Louis, and Guy N. Magness, M.D., University City, are reported.**

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THE A.M.A. INTERIM SESSION convened Monday, November 27, at 10:00 a.m. Missouri delegates present were Drs. Petersen, Kiene and Neilson. Dr. Guy N. Magness, alternate, University City, served in place of Durward G. Hall, M.D., Springfield. Dr. Hall was unable to attend because of other pressing business. Among others from Missouri who attended were J. H. Summers, M.D., Lebanon; Rolla B. Wray, M.D., Nevada, alternate delegate to the A.M.A.

H. E. Petersen, M.D., St. Joseph, served as a member of the House of Delegates Reference Committee on Miscellaneous Business. A. W. Neilson, M.D., St. Louis, served as a member of the Reference Committee on Executive Session.

Social Security health care, relations with the American College of Surgeons, organization of the American Medical Political Action Committee, medical discipline and polio vaccine were among the major subjects acted upon by the House of Delegates at the American Medical Association's Fifteenth Clinical Meeting held Nov. 26-30 in Denver.

Sounding the keynote for the Association's campaign to oppose enactment of the King-Anderson type of legislation in 1962, Dr. Leonard W. Larson of Bismarck, N. D., A.M.A. president, told the opening session of the House that proposals to incorporate health care benefits into the Social Security system "would certainly represent the first major, irreversible step toward the complete socialization of medical care."

The compelling issue, Dr. Larson declared, is socialization versus voluntarism—or compulsion versus freedom of choice. He predicted that courage, determination and the will to win on the part of physicians will bring the defeat of the King-Anderson bill in Congress next year.

Pointing out that "we are engaged in an historic struggle to preserve our country's unique system of medical care and our stature as a profession," Dr. Larson said:

"We are for voluntarism. We do not believe that Americans, acting either as citizens or as patients, require central direction from government in their choice of doctor or hospital, in the spending of their health care dollars, or in their selection of the health services and facilities best suited to their own individual needs.

"We take our stand for voluntary cooperation, for preservation of the historic federal-state organizational structure, for individual responsibility, for help for those persons who need help."

Dr. Larson emphasized that the A.M.A. will continue to give primary attention to implementing the Kerr-Mills Act in the states, promoting voluntary health insurance and prepayment plans designed for the aged, and upgrading nursing homes.

The House of Delegates gave enthusiastic approval to Dr. Larson's address and took several actions reaffirming strong support for the Kerr-Mills program to aid the needy and near-needy, and urging a concerted, determined fight against Social Security health care proposals in Congress.

The House advised all state and county medical societies to recognize the impending threat and to prepare now for any eventuality by continuing to oppose any scheme which tries to impose a substandard system of medical care on the American people.

"United, as well as individual, effort is essential," the House declared. "To stop short of our total effort is to invite disaster and to let loose upon our beloved America irreversible forces which will ultimately destroy her. We cannot and we must not fail."

### AMERICAN COLLEGE OF SURGEONS

The House agreed with the intent of five resolutions which expressed strong dissatisfaction over recent statements by a spokesman for the American College of Surgeons, and it also approved a Board of Trustees report informing the House that arrangements have been made for a January meeting with the ACS Board of Regents to discuss that organization's recent statements and policy positions. The report expressed hope that the meeting "will lead to a unification of effort in behalf of American medicine."

The House instructed the Board of Trustees to take the five resolutions to the January meeting and to report to the delegates as soon as possible on the results of the meeting. In taking the action, the House approved a reference committee report which said:

"Your reference committee believes the public airing of disagreements between large segments of medicine can only confuse and shake the confidence of the public in the medical profession and distort the true image of medicine which the American people should have.

"However, in its hearings upon the several resolutions relating to the recent statements of the American College of Surgeons, all those who testified were in opposition to the actions and statements of the ACS. The majority of those who spoke were Fellows of the American College of Surgeons.

"Your reference committee has no wish to fan the flames of controversy ignited by the statements of the American College of Surgeons. On the other hand, the committee feels the House has an obligation to its membership—which includes physicians in all types of practice—to agree with the indignation manifested by the introduction of these resolutions and in the discussions before the committee.

"This is all the more important because the position of the American College of Surgeons is based on an incorrect interpretation of the action of this House which in no sense is a retreat from its position of firm opposition to fee splitting."

### American Medical Political Action Committee

The House heartily approved the purposes and goals of the recently-organized American Medical Political Action Committee and urged all physicians, their wives and interested friends to join AMPAC and other political action committees in their states and communities.

"Effective political action must be carried on at the local level and effective implementation must be done by local groups of physicians," the House said. "The formation of AMPAC recognizes the need for a national medical political action committee to coordinate the political activities of physician groups at all levels throughout the country."

The purposes of AMPAC, which is an organization separate and distinct from the American Medical Association as required by federal law, are:

1. To promote and strive for the improvement of government by encouraging and stimulating physicians and others to take a more active and effective part in governmental affairs.
2. To encourage physicians and others to understand the nature and actions of their government as to important political issues and as to the records and positions of political parties, officeholders and candidates for elective office.
3. To assist physicians and others in organizing themselves for more effective political action and for carrying out their civic responsibilities.
4. To do any and all things necessary or desirable for the attainment of the purposes stated above.

### Medical Discipline

The House received from the Council on Constitution and Bylaws a proposed amendment which would have made it possible to implement a recommendation by the Medical Disciplinary Committee that was approved by the House at the June, 1961, meeting. This recommendation was to change the bylaws so as to confer original jurisdiction on the Association to suspend and/or revoke the AMA membership of a physician found guilty of violating the Principles of Medical Ethics or the ethical policies of the Association, regardless of whether or not action has been taken against him at the local level. However, after considerable discussion on the floor of the House, the proposed amendment was referred back to the Council on Constitution and Bylaws.

In another action on medical discipline the House approved the expanded activities of the Judicial Council, which has taken over permanent responsibility in that area, and said that the Council program should benefit all physicians, the public and the profession.

### Polio Vaccine

The House adopted a resolution which urged that medical societies at the local, county, district or state levels throughout the United States should encourage, stimulate and participate in surveys to determine the percentage of individuals in each community who have undergone immunizing procedures for poliomyelitis.

The resolution stated that on the basis of the results of the surveys, the local medical society should determine the type of vaccine and the most effective type of program which will be of greatest benefit to the public.

Until such time as all three types of oral vaccine are available, the resolution concluded, the Salk vaccine should be the vaccine of choice for routine poliomyelitis immunization, with the choice of program for administering the vaccine to be determined on a local basis by each county medical society.

### Miscellaneous Actions

In considering a wide variety of resolutions and annual and supplementary reports, the House also:

Disapproved of two proposals which would have required that resolutions be introduced 30 and 45 days, respectively, before Association meetings.

Approved a statement that physicians have an ethical obligation to participate in medical society activities and express their opinions fully and freely.

Reaffirmed AMA policy that it is not considered unethical for a physician to own or operate a pharmacy provided there is no exploitation of the patient.

Agreed with the Judicial Council that the physician himself is responsible for the control and custody of drug samples once they come into his possession, and in the high tradition of the medical profession he should not dispose of them in any way that could cause harm to others.

Commended those constituent medical societies which have moved forward in the area of human relations by eliminating membership restrictions based on race or color. In connection with the same subject, Dr. Peter Murray of New York City, retiring after 12 years of service in the House, told the delegates in a farewell address that Negro physicians now have some kind of medical society membership in every state except one.

Approved a recommendation that a special House committee be appointed to investigate all facets of the operation of the Joint Commission on Accreditation of Hospitals.

Agreed with the Board's choice of Miami Beach, Florida, as the site for the 1964 Clinical Meeting.

Approved the combining of the American Medical Education Foundation and the American Medical Research Foundation into the American Medical Association Education and Research Foundation, effective next January 1.

Deferred action on a proposed study of fund raising by voluntary health agencies, pending the development of additional information by the AMA Committee on Voluntary Health Agencies.

Reaffirmed the previous policy that physicians should have the privilege of prescribing drugs by either generic or brand name.

Approved the principle of income tax deductions for medical care of the aged.

Recommended, in reviewing the Medicare Program, that all county medical societies in the area surrounding armed forces hospitals make a serious attempt to establish formal liaison with the physicians on those hospital staffs.

Endorsed the administration of indigent medical care programs developed in cooperation with local medical organizations as a legitimate activity of state and local health departments.

Urged the elimination of all "categories" in programs of assistance to the needy at the federal and state level, with all assistance provided through a single program.

Referred to the Council on Medical Service a resolution proposing the use of state and federal tax funds to provide voluntary prepayment health insurance protection for the aged. In a related action the House approved of experimentation with prepayment plans under assistance programs.

Urged more vigorous promotion of voluntary non-profit prepayment health plans.

Urged every physician in the United States to use automobile seat belts.

Recommended, as a civil defense measure, a mass immunization program for the general public.

Suggested that the Board of Trustees continue its negotiations to develop a group disability insurance program for AMA members.

Concurred in the Board's appointment of a special committee to study the organizational status of AMA Sections, the functions of the Scientific Assembly and existing procedures for establishing medical certifying boards.

Instructed the Council on Medical Education and Hospitals to study the present and potential contribution of the American Board of Abdominal Surgery to the advancement of the art and science of surgery and the betterment of public health, to determine whether it should be approved as a recognized examining board.

Approved and commended the objectives and program submitted by the Committee for Liaison with National Nursing Organizations.

Recommended that the Secretary of Defense

*(Continued on page 62)*

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SOLOMON GARB, M.D., *Columbia*

# Thermonuclear Survival

## *Special Article*

### The Need for Action

The problem of survival, both individual and national, in a thermonuclear war is becoming daily more acute. There are arguments over who has the responsibility for protection of the civilian population. Some say the federal government, others the state and local governments, and still others would have the individual citizen assume the primary responsibility. This controversy has a disturbing parallel to the controversy between the Army and the Navy as to who was responsible for the protection of Pearl Harbor.

This series of articles is not designed to settle the question as to who is responsible primarily for protection of the civilian population. However, it is hoped that by explaining the important facts this series can help generate an informed public opinion. The important information is not secret, but it is so scattered through scores of government and private publications that it is unlikely that many persons will have the time to dig out the material. In a sense, then, this series will serve a function similar to that of a review article.

It is particularly appropriate that the medical profession be well informed about problems of survival and civil defense. Obviously, physicians will assume command of efforts to save as many lives as possible and therefore should understand the forces with which they will be dealing. There are also other reasons. Of all groups in the population, physicians best understand the importance of prevention of morbidity. By education and experience they can also comprehend more readily some of the more technical aspects of the problem. Furthermore, as respected members of their communities they can provide advice and example which will carry great weight. Finally, there is perhaps the most compelling reason—there is no other group which can exert the necessary leadership.

No attempt will be made to discuss the purely medical and surgical aspects of survival, such as triage, since these have been amply covered elsewhere. The effects of thermonuclear bombs and the ways in which to minimize these effects, and related material will be considered. Some readers may use the information as a guide for building a shelter for their own families. Others may find it helpful for clarifying their thinking about government participation in a national shelter program. Still others may use it within their own communities. It is less important who protects the American people than it is that it be done properly, and in time.

**This is the first of a series of articles dealing with thermonuclear survival. These include material previously published in the *New York State Journal of Medicine,* and are published with permission of that journal.**

**Dr. Garb is secretary of Medical Education for National Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.**

**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

The American public is the primary culprit in our present state of civilian unpreparedness. There has been an apathy—even hostility—to civil defense matters. It seems as if the American public is unwilling to turn from its pursuit of pleasure and status to face the grim realities of a possible war. Such attitudes are not new. They led to the fall of the Roman Empire as well as to the fall of other civilizations. Fortunately, it is not necessary to convince everyone of the need for action. If a substantial minority of the thinking citizens are convinced, they would tip the scales.

*Some Widely Held Misconceptions.* To understand the situation clearly, it is advisable first to clear up some of the widely held misconceptions about hydrogen bomb warfare and protective measures. It is necessary that physicians understand these attitudes so that they may more readily combat them.

Can we run away from the bombs? Some people believe that it is practical to try to escape death from a hydrogen bomb by fleeing the big cities and "going to the hills." This is an error the roots of which lie in the early civil defense planning against atom bomb attacks. The atom bomb produced most of its casualties by blast, heat and direct radiation from the fireball. Radioactive fallout was not a significant factor. However, with a hydrogen bomb, radioactive fallout is potentially the most deadly effect and, in the absence of proper shelter, can kill over an area between 100 and 1,000 times greater than the area of lethal blast. Adequate shelter against fallout is not available along roads and cannot be constructed in a short time. In the event that the United States is attacked, the probability is that the radioactive fallout will cover almost the entire country, so that no area would be safe without proper shelter. People who are in automobiles when the fallout descends will have practically no chance for survival.

This conclusion is derived to a large extent from some simple calculations based on the known facts about hydrogen bombs which will be discussed in greater detail in another article. It is also based on House Report No. 2946, 84th Congress, 2nd Sessions, July 27, 1956, and later reports. These reports were made by the Military Operations Subcommittee after careful analysis of all the available information on hydrogen bombs. It should be noted that the congressmen submitting the report have had wide experience in evaluating military operations and are neither hysterical nor easily fooled. They point out that with large yield weapons the value of dispersal without shelter drops to zero.

Are civil defense measures useless in the face of hydrogen bombs? The dreadful arithmetic of hydrogen bomb casualties apparently stuns many persons, and elicits an attitude of "It's no use." This attitude must be analyzed and combated. It has been stated that an enemy attack on the United States as it is today would kill about 70 million Americans. Shelters would reduce this fatality rate considerably; not more than 35 million would die if there were adequate shelters, and the death toll might go as low as 5 million. Unfortunately, few people can grasp the real significance of these figures. They take the attitude that 35 or 5 million deaths are practically the same as 70 million, and that protective measures are of little value. However, attention should be focused on the number of people who can be saved, not on those who cannot. A realistic appraisal shows that a shelter program would save 35 to 65 million lives. Surely this is a worthwhile objective.

This principle is, of course, familiar to all physicians. If the death rate from some disease is high, physicians do not therefore abandon or diminish their efforts to save as many lives as is possible.

A frequent argument is that since hydrogen bomb warfare, even with shelters, would kill millions of people, all efforts should be directed toward preventing future wars, and shelters should be ignored. This argument, however, misses the point. Building shelters and trying to prevent war are not in any way mutually exclusive. Of course, attempt should be made to avoid wars. Shelters do not in any way threaten other nations, so there is no reason why efforts to avoid war would be impeded by having shelters.

A corollary argument, which is sometimes heard, is that the energy placed into building shelters should be directed toward preventing war. This, of course, sounds good at first. But, how is this energy to be converted? If a man is about to build a shelter in his basement, how can he go about changing his muscular work, changing the wood and concrete that he is going to use, into a force for preventing war? He could, of course, spend his time writing letters to American leaders, saying he wants peace. However, the leaders already know that we want peace, and they also want peace. We are not the ones who want war. Will it do any good to spend the time writing letters to the Russian leaders saying that we want peace? Inasmuch as the Russian people are known to want peace, and inasmuch as the Russian leaders generally ignore their own peoples' wishes, it hardly seems likely that a flood of letters from Americans to Russia would do any good. Unfortunately, there is no clear way in which the average person can change the energy and effort which will be used for Civil Defense into efforts to promote peace.

Some people fear that a thermonuclear war would eventually kill all life on earth and therefore feel that shelters would be useless anyway. This fear has been increased by the recent motion picture, "On the Beach." However, it must be remembered that motion pictures are flights of fancy, not scientific evidence. Those who have seriously studied the problem have come to the conclusion that although conditions may be stark, man will survive. Not only American[1] but also Russian[2] students of the problem have come to this conclusion.

There are persons who contend that shelters will do little good since at the end of a two week stay in the shelter, when one comes out, one will be killed by the radioactivity anyway. This misconception is also based on some incorrect moving pictures, and novels. Actually radioactivity levels fall rapidly so that the main protection is needed for a relatively short time only. Of the total amount of radioactivity given off in an area in a ten year period from a bomb, more than half will be given off during the first seven hours. In other words, protection during the first seven hours is more important than protection for the next ten years, assuming a fallout from a single bomb. During the first 48 hours, approximately 65 per cent of the total radiation will be delivered to any area. Thus, even if one is in an area where the initial fallout radiation levels are enormous—enough to kill within six minutes—it will be possible to come out of a shelter in that area in two weeks because the radiation will have fallen to a much lower level.

Is instantaneous death preferable to survival in a devastated country? At times, in discussions of the value of shelters, some people say they would prefer to perish instantaneously in the flash of the bomb, without knowing what has happened, rather than to live in a world in which civilization and culture are destroyed. This attitude is based on several misconceptions. To be sure, people within a mile of ground zero will probably be killed within a fraction of a second. However, for every person killed so mercifully, between 100 and 1,000 will die a lingering death from radioactive fallout unless they have adequate shelter. Furthermore, if really faced with a concrete choice it is doubtful that many would actually prefer death to life, even in a vastly changed world. Physicians have had considerable experience with the intensity of the "will to live."

There is another aspect to consider. Assume that those who say they would prefer not to live after another war still feel that way when the chips are down. Do they then have the right to condemn not only themselves but their children and unborn descendants as well? It is quite likely that life will be bitter for two, perhaps three generations after a war. But the decision to die will involve the destiny of thousands of generations. Can anyone be sure that in five or 10 generations life would not become more normal?

These questions have arisen before and have been answered. The Bible gives some valuable examples. Consider the Israelites in Egypt. For generations they were enslaved. Their lives were as bitter as any we can imagine in a postwar world. They could have given up, said that life was not worth living, and died off. If they had, Moses, Isaiah, Peter, Mary and Jesus would never have been born. Fortunately, however, the Israelite slaves had the courage to survive. We must find the same courage, even after a possible disastrous war.

Are the dangers of a hydrogen bomb attack exaggerated? Obviously, no one can predict whether or not an attack will come. However, it certainly is better to have defenses that are not needed than to need defenses which we do not have. Construction of shelters does not imply pessimism, but it does mean a realistic appraisal of the existing dangers. The risks of a hydrogen bomb attack do not have to be overwhelming to justify a shelter program. As long as the risks are substantial they call for protection of our population.

Some people believe that the United States government has a great deal of secret information not available to the ordinary citizen and that if there were a real need for special shelters the government would provide them. This belief at first seems reasonable and logical. However, we must realize that the American government is not a dictatorship, and that there are many problems involved before an administration, no matter how capable, or how wise, can undertake an extensive new program. Many Congressmen are more concerned with budget balancing, with taxation levels and with pork barreling than they are with the realities of the current situation. Furthermore, even if there were unanimous agreement in the government about the federal role in Civil Defense, a program of national shelters would take a long time to complete. One cannot dig millions of excavations, and pour billions of tons of concrete overnight. It appears likely that there will eventually be a considerable government shelter program. However, the emergency may be upon us long before it is completed.

Is our retaliatory force so strong as to make an attack on us unthinkable? This question has been studied in detail by Brodie.[3] He points out that "So long as there is a great advantage in striking first, and under existing conditions the advantage would be tremendous, we must realize that even rational men could start a total war, and irrational ones would need no such justification." He also states, "The strategy of deterrence ought always to envisage the possibility of deterrence failing."[4]

The Congressional committee investigating this problem has reached similar conclusions. They believe that we cannot rely on the good judgment of a potential enemy "any more than we can rely on their professed peaceful intentions."

Are shelters "unrealistic" in the face of the shortened warning times from the intercontinental ballistic missiles? This attitude is rather widely held. It is seen in certain publications, and has even been expressed by a United States Senator. It is incorrect.

It is true that an I.C.B.M. can reach the United States in 15 to 20 minutes. At best, we could expect a 15 minute warning before its explosion. Although even a 15 minute warning would help save many lives, it would certainly fail to help others. However, shelters will be lifesavers even if there is no warning whatever. Admittedly, in a complete surprise attack, shelters will not be able to protect against blast, initial fireball radiation, or heat radiation, since no one will have time to get to a shelter before these effects occur.

However, the shelter will protect against radioactive fallout even in a complete surprise attack, and this fallout constitutes about 96 per cent of the danger from the bomb. There will always be a warning time before radioactive fallout. The bomb flash itself constitutes the warning. This flash will be visible for hundreds of miles and cannot be mistaken for anything else in human experience. At a distance of 100 miles, the sky will become more than 10 times as bright as at noon on the brightest day, and the brightness will last for almost one minute. After the flash, there will be an interval of one half to 10 hours before the fallout descends, depending on the distance and the wind velocity. This interval should be enough to allow most people to reach a shelter—if there are shelters to reach. Thus, it should be clear that the I.C.B.M. does not make shelters obsolete; it makes them essential.

Are shelters too costly? Shelters vary in cost. In a later article, the costs will be discussed in detail. In general, it will be shown that an excellent shelter can be provided at a cost of $50 to $200 per person. A shelter for an average family would cost less than the shelters now used for the family car.

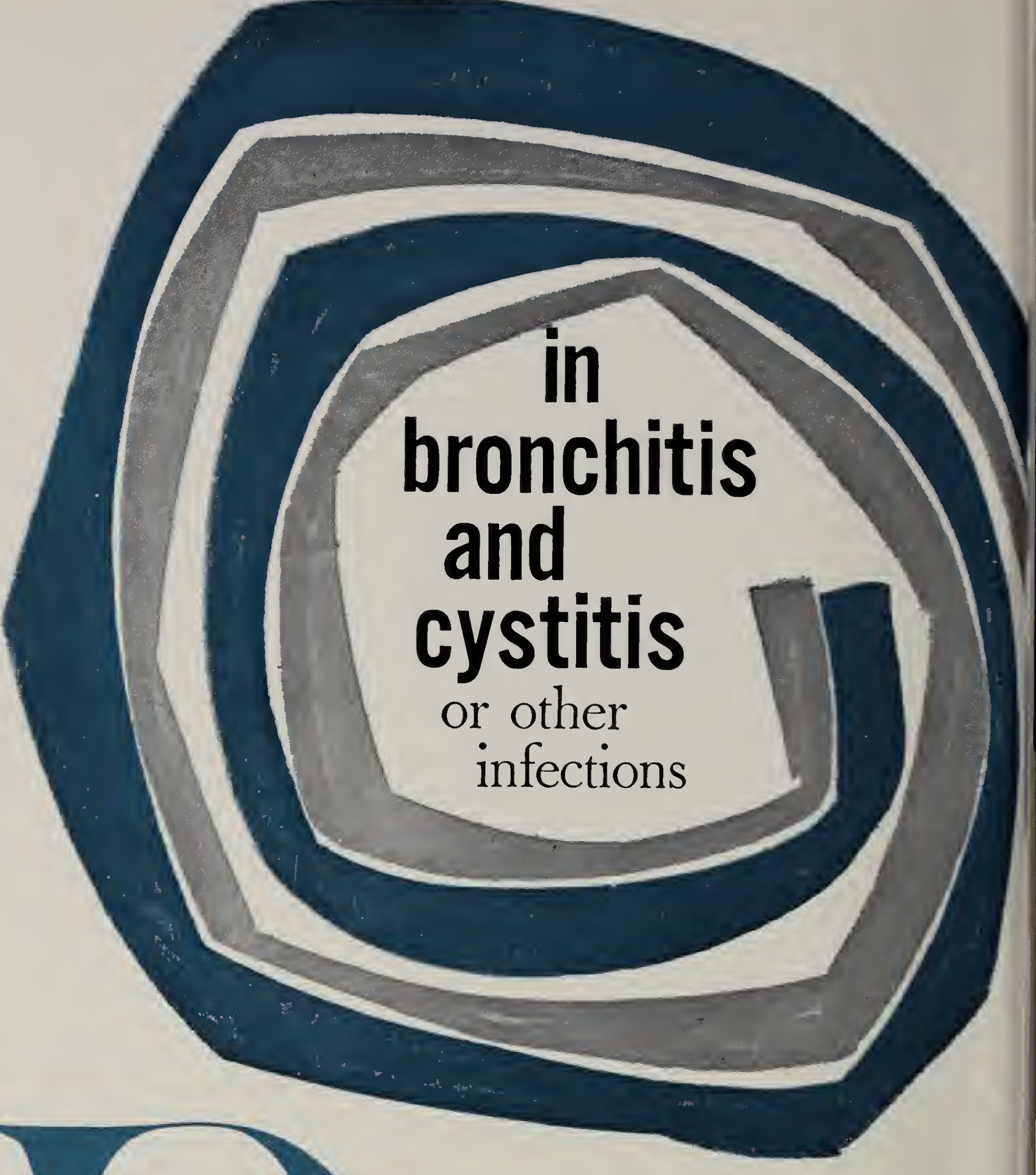
Are civil defense programs inspired by "do-gooders"? The answer to this question depends on the definition of "do-gooder." Civil defense programs are supported by President Kennedy, governors, leading military personages, scientists like Edward Teller, and the medical profession.

Are civil defense programs "defeatist" or "cowardly"? Oddly enough, there are persons who consider protective measures to be cowardly. They are usually people who have had little experience with war or death. Essentially, they are covering up their own anxiety by trying to put on a bold front. Their attitude is akin to the patient who refuses to see a doctor when he has symptoms suggesting cancer. He fears that the doctor might find cancer. Similarly, the objector to civil defense programs is usually afraid to face reality of the current situation. It has been said that those who have not the courage to face the possibility of thermonuclear war are not likely to find the courage to cope with that war if it comes.

Clearly, it is no more cowardly to construct a shelter than to be vaccinated against smallpox or to stop for red traffic lights.

What good would the shelter be if I am asleep, or downtown when the bomb explodes? The flash of the bomb will awaken the soundest sleeper 100 miles away. There should also be shelters in downtown areas for people who cannot get home before the probable descent of fallout.

*Effect on National Survival.* Thus far, the need for shelters has been discussed from the standpoint of family survival. However, another aspect at least as important is also involved. If enough individual shelters are built, they may prevent an attack. A potential enemy is more likely to attack if he believes he can completely destroy us in one day with a relatively small number of weapons. He may even be willing to allow millions of his own countrymen to die in our retaliatory attacks if he can be sure of destroying us. However, if he cannot be sure of our destruction he may, at the crucial time, decide not to risk all-out war. Properly constructed and equipped shelters will make it virtually impossible for any enemy to destroy us completely. The details are presented in the following articles in the series. In summary, they show clearly that if enough good shelters are built, the deadly effects of the hydrogen bomb will be reduced to almost one thousandth of the effects without shelters. The shelter not only protects the civilian population; it reduces the likelihood of an attack.



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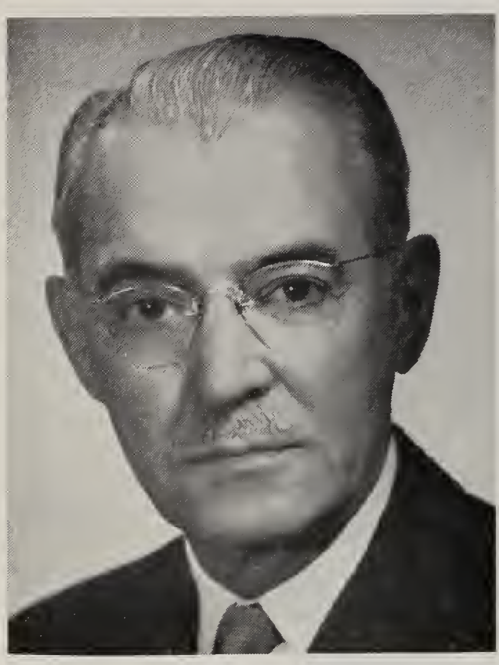
# President's Message



J. H. Summers, M.D.

"What's New" starts the scientific program for the 1962 Annual Session. The program, nearing completion, appears in this issue of Missouri Medicine and, while the title of only the first presentation is "What's New," that theme carries through the entire program.

It is a diversified program, covering practically every special field of medicine. To assist in planning this broad coverage of medical endeavors, the Program Committee again enlisted the help of various specialty societies who obtain and sponsor speakers in their particular fields. Panels, symposia and sessions devoted to particular interests are interspersed with individual presentations.

The entire session, with the exception of some reference committees of the House of Delegates will convene on the lobby floor of Hotel Chase, Lindell and Kingshighway Blvds., St. Louis. The House of Delegates will meet Sunday afternoon, March 18, and the scientific session will begin at 9:00 a.m., Monday, March 19.

Remember the dates—March 18 to 21, Hotel Chase, St. Louis.

J. H. Summers, M.D.

# EDITORIALS

## NATIONAL POISON PREVENTION WEEK

Representatives of 21 professional, industrial and service organizations and federal agencies met in Washington, D. C., on November 21 to plan the first National Poison Prevention Week, to be observed March 18 to 24, 1962. A recent Act of Congress authorized the President to designate the third week of March each year as National Poison Prevention Week.

Honorary chairman of the steering committee is Homer A. George, a practicing pharmacist of Cape Girardeau, who campaigned for several years for the passage of the act. H. J. Resolution 358 was sponsored by Congressman Paul C. Jones, Kennett, and was signed into law as PL-87-319 by President Kennedy on September 26, 1961.

The meeting was called by the National Clearinghouse for Poison Control Centers of the U. S. Public Health Service and the American Pharmaceutical Association. Also on the committee were representatives of the National Safety Council, the Food and Drug Administration and the American Academy of Pediatrics. Plans were set up for activities in 1962 and plans started for the 1963 campaign.

Children less than 5 years of age were selected as the target for the campaign since some 302,000 children under 5 years suffer accidental poisoning every year.

## NUMBER OF MEDICAL STUDENTS INCREASES

The number of students accepted for enrollment in medical schools in this country in 1960-1961 increased a total of 48 over that of last year. This increase is probably the result of the addition of the University of Kentucky College of Medicine. However, it is the sixth consecutive year in which there has been an increase in the number of applicants accepted, and it is expected that the increase will continue.

In contrast to the number of applicants accepted, the total number of applicants dropped to 14,397, the fourth such decrease since 1956-1957, and approximately four per cent from 1959-1960.

According to the Association of American Medical Colleges, although absolute numbers of applicants may increase as a result of increasing larger enrollments in undergraduate colleges, comparable increases in the total number of accepted applicants can also be anticipated as a function of the development of new schools of medicine.

The association points out that the last century has witnessed a growth in the number of professional personnel which is more than three and a half times faster than that of the general population growth for the nation. In this context John W. Gardner, President of the Carnegie Corporation, says that "The demand grows out of the nature of our society. . . . We are just beginning to understand that one of the distinguishing marks of a modern, complex society is its insatiable appetite for educated talent." If this generalization proves true, medicine may have even greater competition with other fields in the future.

## VOLUNTARY HEALTH INSURANCE CONTINUES TO GROW

Virtually unknown in this country only a generation ago, voluntary health insurance has grown into a "highly complex structure covering almost three-quarters of the U. S. population," states *Progress in Health Services*, the monthly statistical bulletin of Health Information Foundation.

A generation ago, the Foundation pointed out, health insurance was designed to offer protection against the costs of hospital care. Still the most popular type of coverage, at the end of 1960 almost 132 million Americans, or 73.4 per cent of the population, were covered for hospital expenses under Blue Cross, insurance companies or independent plans.

Although entering the field later, surgical, regular medical and, more recently "major medical" coverage, have begun to catch up with hospital insurance. By 1960 more than 121 million persons were covered by surgical insurance and 87.5 million were enrolled under regular medical policies.

Major medical insurance covered too few persons to warrant listing it as late as 1950. However, since then, according to the Foundation, its growth "was little short of phenomenal, and it covered just under 27:5 million, or 15.3 per cent of the civilian population, at the end of 1960."

# News—Personal and Professional

The American Board of Dermatology and Syphilology recently named **Clinton W. Lane,** M.D., St. Louis, as president.

The Diabetes Lay Society of Greater Kansas City recently heard "Detection of Diabetes in Industry" presented by **Arthur B. Rhodes,** M.D., Kansas City.

"Dr. Martin Appreciation Day" was held in Odessa on November 27, the 70th birthday of Dr. **W. E. Martin** and the culmination of 38 years of practice in Odessa. The celebration included a program at the Odessa High School gymnasium with a "This Is Your Life" theme.

Among guest speakers at a postgraduate course at the Ochsner Foundation Hospital in New Orleans, January 15 to 18, will be **Carl V. Moore,** M.D., St. Louis.

Elected president of the American Cancer Society for a two year term at a meeting on October 15 was **Charles E. Lockhart,** M.D., Springfield. Recipients of honorary memberships were **Everett D. Sugarbaker,** M.D., Jefferson City, and **Edwin C. Ernst,** M.D., St. Louis. Among members-at-large on the board of trustees were named **George A. Carroll,** M.D., St. Louis; **William Gillespie,** M.D., St. Louis, and **George O. Miles,** M.D., Kansas City.

St. Louis Area Chapter, National Multiple Sclerosis Society, had as featured speaker at the 1961 annual meeting **Louis Tureen,** M.D., St. Louis.

St. Vincent's Hospital's 58 man medical staff, 25 man advisory board and 33 auxiliary board members honored **Paul E. Kubitschek,** M.D., St. Louis, at a dinner at the hospital on November 8.

Among members elected to the executive committee of the section on ophthalmology and otolaryngology of the Southern Medical Association at a meeting at Dallas in November was **Ben H. Senturia,** M.D., St. Louis.

Reelected president of the St. Louis Heart Association at a meeting in October was **Walter Baumgarten,** M.D., St. Louis. **Brent M. Parker,** M.D., St. Louis, was elected to the board of directors for a three year term.

The Bonner Springs Rotary Club had as a recent speaker on "Surgery in Children" **Victor G. McDonald Jr.,** M.D., Kansas City.

"Coronary Heart Disease" was the subject of a talk given by **Robert S. Mosser,** M.D., Independence, before the Independence Lion's Club recently.

Serving as members of a panel on the subject "Treatment Is the Tool—Teamwork Is the Answer" for the Kansas City nursing schools recently were **Hugh L. Dwyer,** M.D., and **Charles B. Wheeler,** M.D., Kansas City.

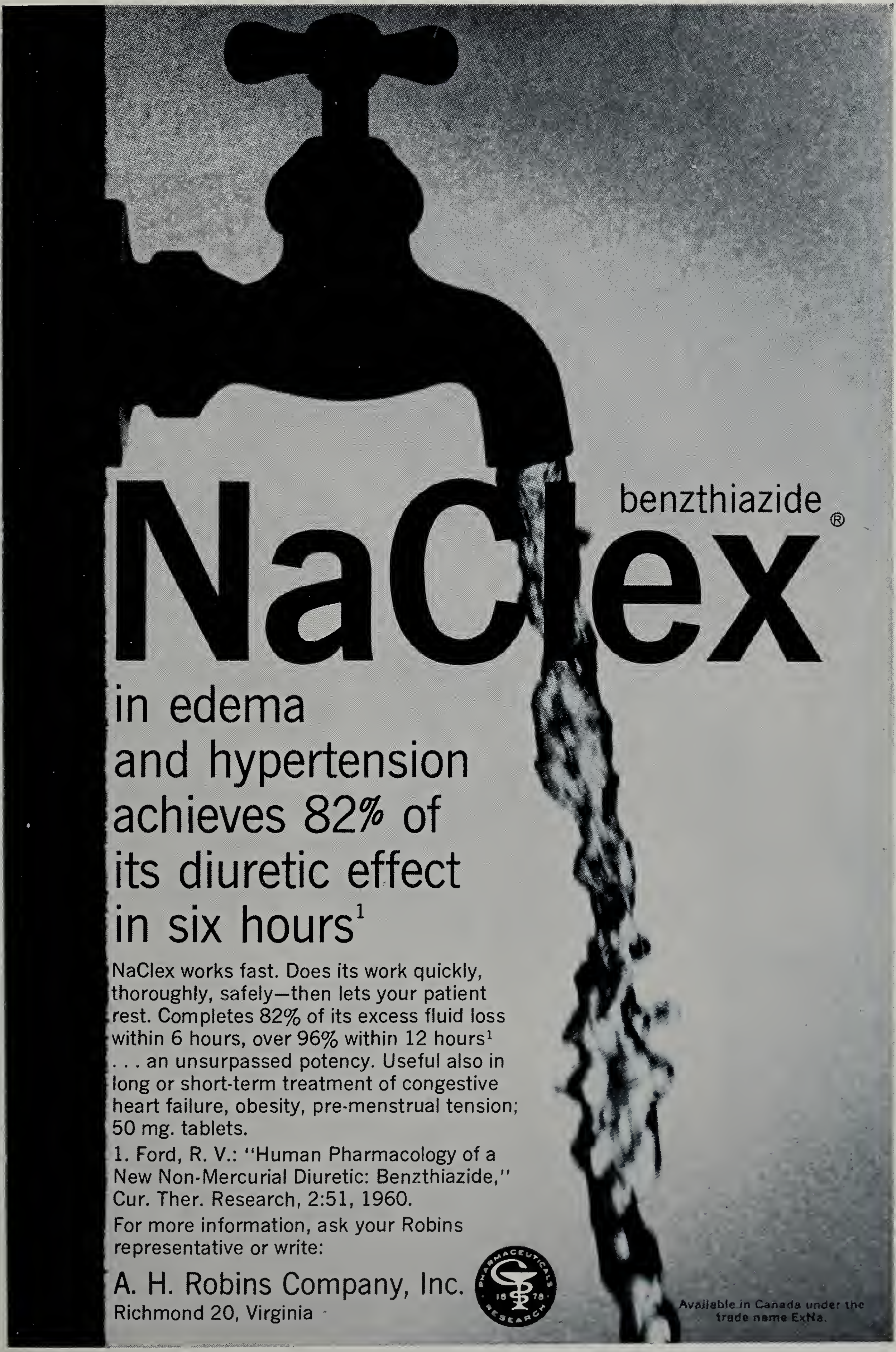
Elected a director of the St. Louis Convention Board at a meeting on October 24 was **James M. Macnish,** M.D., St. Louis.

Psychosomatic aspects of illness was discussed by **E. Hadyn Trowbridge Jr.,** M.D., Kansas City, at a conference for Missouri nurses in Kansas City in November.

Speaker at the Cleveland, Ohio, Academy of Medicine on November 29 was **Eugene M. Bricker,** M.D., St. Louis. His subject was "Practical and Philosophical Considerations of the Surgical Treatment of Advanced Cancer of the Pelvic Viscera."

The Methodist Hospital, St. Joseph, has elected **John R. McDaniel,** M.D., St. Joseph, as president. **Forrest C. Long,** M.D., Savannah, was

*(Continued on page 52)*



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1. Ford, R. V.: "Human Pharmacology of a New Non-Mercurial Diuretic: Benzthiazide," Cur. Ther. Research, 2:51, 1960.

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# Ramblings of the Field Secretary

Many important statements were made at the November 26-30 Interim Session of the A.M.A., in Denver, by speakers at both scientific and business sessions. Some of these statements were:

Probably 50 per cent of suicides could be averted if doctors and the public recognized the danger signals in time and gave help. More than 19,000 people committed suicide in the United States in 1960. The public should be educated to accept psychiatric care and must be made to understand that the recovery rate from all types of depression is excellent.

Several surveys show about 12 per cent of the nation's motorists have had significant amounts of alcohol before driving and 60 per cent of the nation's fatal traffic accidents involve drinking drivers.

The average yearly number of observed polio paralytic cases in the period 1949-54 was 24,756. The number of such observed cases in 1960 was 2,551.

It doesn't harm junior's eyes to let him read in bed, watch all the TV he wants, read in bad light or spend all afternoon at the movie. It doesn't hurt his eyes if he watches TV while he's sitting down, lying down, upside down or hanging from the chandelier. Failure to use eyes may do greater harm than using them. Much watching of TV or movies may give junior "eyestrain," but that is simply fatigue of eye muscles, just as arms and legs get tired from exercise.

There is no justified medical reason for eliminating formal coffee breaks in industry. Physicians should be alert, however, to the medical implications of more and more coffee drinking, since a nation of 180 million people cannot consume over 100 billion cups of coffee a year without producing some illness.

Imagine the universal opposition to federal aid to education bills if they, like the King-Anderson Bill, provided for direct, federal payment of teacher's salaries. Yet this is exactly what the King Bill does for hospitals, nursing homes and thousands of physicians. A proposal which places the primary responsibility for the purchase of health care on the federal government, financed by compulsory payroll taxes and equivalent taxes on employers, administered directly by the Social Security Administration, providing benefits without regard to financial need, and for which the federal government has no logical responsibility—certainly such a proposal can properly be categorized as "socialized medicine."

Our obligation of citizenship carries with it our duty to maintain a constant, continuing interest in public affairs and political issues—not just at election times, but day after day, month after month, year after year. Only in this way can we and our fellow citizens assure that when an election does roll around, it will offer a meaningful choice between good candidates who clearly represent different viewpoints.

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## NEWS—PERSONAL AND PROFESSIONAL

*(Continued from page 50)*

elected first vice president; **John N. Martin**, M.D., St. Joseph, was elected second vice president, and **Warren C. Baker**, M.D., Savannah, was reelected secretary-treasurer.

Taking office in January are **Edward M. Cannon**, M.D., St. Louis, as president of the Missouri Baptist Hospital. **Roy A. Walther Jr.**, was elected vice president, and **James R. Meador**, M.D., Clayton, secretary-treasurer. Drs. **George L. Hawkins** and **Lee T. Ford**, St. Louis, were elected board members.

"Family Relations" was discussed by **George J. Lytton**, M.D., Kansas City, at the George Caleb Bingham Junior High School PTA in October.

Recently **Charles B. Wheeler Jr.**, M.D., Kansas City, spoke before the Independence Rotary Club on "Scientific Criminal Detection" and at a law enforcement conference in Columbia on "Homicides, Recognition of Cause of Death."

The Blue Springs Junior High School PTA heard "The Screaming Teens" discussed by **David F. Eubank**, M.D., Raytown, on November 30.

"How do
you feel
lately, Mrs. K?" *"Well, Doctor, some customers still
et on my nerves'... but somehow this doesn't bother me
s much... I feel better now and people seem easier to
et along with..."* "Feel sleepy?" *"No, nothing like that."*

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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Clay County Medical Society

The Clay County Medical Society and its Auxiliary met on November 28, 1961, at the Yates College Union, Liberty, for their monthly dinner meeting.

The scientific program was given by Charles Workman, M.D., who discussed simple fractures of the hand.

New officers were elected for the year 1962 as follow: President, Theodore F. Edwards, M.D.; President-Elect, Edward H. Fischer, M.D.; Vice-President, Donald E. Kuenzi, M.D.; Secretary-Treasurer, John B. Withrow, M.D. Member of the Board of Censors (3 years), Truman B. Schertz, M.D. Member of the Executive Committee, Glenn W. Hendren, M.D., alternate, George E. Sanders, M.D.; Delegate to the State Convention, Robert H. Hodge, M.D., Alternate, Richard P. Bowles, M.D.

B. L. Mullins, M.D., *Secretary*

### Grand River Medical Society

Members, their wives and guests met at the Strand Hotel in Chillicothe for the regular dinner meeting on Thursday night, November 9. Approximately 40 people were present.

Dr. Robert M. Hazen, Kansas City, spoke on "Common Ear, Nose and Throat Problems for the Man in General Practice." The address was highlighted with color slides and was well received by the audience. Evidence of this was the lengthy question and answer period which followed the paper.

Mrs. Leonard Fair addressed the ladies in a separate meeting on the subject "Mental Health."

Guests present in addition to the speaker and his wife were three representatives of the Gerber Products Company.

At the business meeting the election of officers for 1962 was held and are as follows: President, Ralph W. Bohnsack, M.D.; first vice president, George Gary, M.D.; second vice president, James H. Sweiger, M.D., secretary-treasurer, Frank R. Daley, M.D.

Dr. Donald Dowell, President-Elect of MSMA, reported on the fine meeting at Columbia on M.D. Day. Dr. Leonard Fair spoke on encouraging young men in the local communities to seek careers in medicine.

The president urged all members to give freely to the AMEF and pointed out the urgency of this program.

C. L. Clark, M.D., *President and Secretary Pro tem*

### Buchanan County Medical Society

The sixth annual joint meeting of the Buchanan County Medical Society and the St. Joseph Bar Association was held on November 8, 1961, in the Empire Room of Hotel Robidoux, St. Joseph. Presiding jointly at the dinner and meeting were the presidents of the two groups; Dr. Judson M. Hughes and Mr. David H. Morton. More than 100 physicians and attorneys attended the event. Arrangements for the dinner meeting and social hour preceding were made by the program chairman of the organizations, Dr. John N. Martin and Mr. Fred Schoenlaub.

The speaker was Mr. Tom Eagleton, Attorney General of Missouri, who spoke on "Freedom." Mr. Eagleton, a dynamic personality and forceful speaker is the youngest man ever to be elected Attorney General in the State. His talk mainly expressed his views against wire tapping.

In the audience was David C. Perry, M.D., a 50-year practitioner from Mound City, to whom the speaker paid particular tribute. Dr. Perry is the father of William D. Perry, M.D., St. Louis, Chairman, Missouri State Board of Registration for the Healing Arts.

William B. Rost, M.D., *Secretary*

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## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### North Central Counties Medical Society

A meeting of the North Central Counties Medical Society was held in Kirksville on Monday, November 20. Officers elected for 1962 at this meeting were Paul E. Hilton, M.D., Kirksville, president, and E. M. Grim, M.D., Kirksville, secretary-treasurer.

P. E. Hilton, M.D., *Secretary*

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## FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Jefferson County Medical Society

The Jefferson County Medical Society met at 8:00 p.m. on October 24, 1961, at Jefferson Memorial Hospital. A brief business meeting was held and a memorial donation was voted to be given to the American Cancer Society in memory of Dr. A. E. Sexauer. The Society then voted to accept Dr. J. J. Commerford as an honorary life member retroactive to January 1, 1961, in respect for his many years of service to the residents of Jefferson County.

Following this an illustrated lecture was given by Robert W. Bartlett, M.D., Associate Professor of Clinical Surgery at Washington University School of Medicine and Barnes Hospital, on "Changing Trends in the Surgical Management of Chronic Peptic Ulceration and Recurring Diverticulitis of the Colon." This interesting presentation provoked a considerable amount of discussion during the question and answer period which followed. This unusually well attended meeting was apparently well enjoyed by all present.

F. L. KOZAL, M.D., *Secretary*

## SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

### WEST CENTRAL MISSOURI MEDICAL SOCIETY

The regular meeting of the West Central Medical Society was held at the Inn Hotel, Butler, November 9. The usual social hour preceded the meeting giving time for the members and their wives to enjoy the predinner festivities. The management served a nice steak dinner which was greatly enjoyed.

President Robert Magee introduced the guests of the evening who were to present the program. Dr. M. L. Gentry, District Health Officer, spoke on the new vaccination law which is now being enforced in all of the schools of the state and answered many questions brought out by his presentation.

Mr. Bradley, the representative for the Pfizer Company in this area, was introduced. He made a short talk on some points of the film he was to show which has been prepared by Pfizer Company on the preparation and the use of the oral vaccine for polio. The film was well received and many questions concerning the vaccine were asked and there was considerable discussion about the oral vaccine and its use.

Three new members have been added to our roster this past month: Dr. Phillip Shepherd, Eldorado Springs, who is associated with Dr. Robert Magee; Dr. Rinck and Dr. Combs of the staff of State Hospital No. 3. We welcome these new members and trust that they will be able to attend our meetings. We need added stimulus for our meetings as the attendance has been low these last few months. After all, this Society is for all the members and all members should take an interest in their Society and attend. It is quite embarrassing for the program committee to secure a good program to talk to empty chairs. We hyphenated the five counties to get away from just this sort of a situation. Let us resolve this next year 1962 to attend more often.

Those present were President Robert Magee and wife; Dr. Phillip Shepherd and wife, Eldorado Springs; Dr. Don Geisler, Osceola; Dr. Kern and Dr. William H. Ellett, Appleton City; Dr. A. W. Eklund, Pleasant Hill; Dr. and Mrs. C. A. Lusk, Jr. and C. W. Luter, Butler; Dr. Roy Pearse, Dr. and Mrs. F. L. Martin, Nevada, and our guests Dr. M. L. Gentry and Mr. Bradley.

No business was pending so the meeting was adjourned until December when we will have our annual Christmas program and election of officers for next year. It will be held at the Country Club in Nevada.

CARTER LUTER, M.D., *Secretary*

## EIGHTH DISTRICT

DOYLE McCRAW, BOLIVAR, COUNCILOR

### GREENE COUNTY MEDICAL SOCIETY

The regular meeting of the Greene County Medical Society was held Friday, October 27, 1961, at Galli's Half-A-Hill with 54 members and five guests present. Dr. John P. Ferguson, the President, presided.

The minutes of the September meeting were approved as published in the *Bulletin*. Mr. Dale Brown, local representative for Motorola, Mr. Cedrick Adams, Motorola Design Engineer, and Mr. Bill Thomlinson, Special Products Sales Engineer from Chicago, presented a demonstration and discussion of the Motorola transistorized Radio Pager. To be used in connection with console equipment added to hospital radio systems, the units would cost individual physicians $12.00 per month for five years and then continued under a maintenance contract for $3.30 per month. Life expectancy of the units is 15 years; they have a range of 10 to 20 miles. Base station and console equipment would cost $1,500.

Dr. Ferguson reminded the members that October is American Medical Education Foundation month in Missouri and urged support for this project. The program of the American Medical Association cooperation in the recruitment of volunteer physicians for service in the foreign

*(Continued on page 58)*

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## factor in nearly every illness or disease state❞[1]

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

**rdiac diseases** "Who can say, for example, whether the patient chronically
ith myocardial failure may not have a poorer myocardium because of a moderate
iency in the vitamin B-complex? Something is known of the relationship of vitamin
the intercellular ground substance and repair of tissues. One may speculate upon
effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic
ase."[2] 2. Kampmeier, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

**hritis** "It is our practice to prescribe a multiple vitamin preparation to patients
rheumatoid arthritis simply to insure nutritional adequacy . . ."[3]
ndez-Herlihy, L: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

**gestive diseases** Symptoms attributable to B-vitamin deficiency are com-
ly observed in patients on peptic ulcer diets.[4] Daily administration of therapeutic
mins to patients with hepatitis and cirrhosis is recommended by the National
earch Council.[5] 4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

**generative diseases** "Studies by Wexberg, Jolliffe and others have indi-
d that many of the symptoms attributed in the past to senility or to cerebral arterio-
rosis seem to respond with remarkable speed to the administration of vitamins,
icularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of
g persons is lowered, even to the danger point, more than is the case in the average
erican adult."[6] 6. Overholser, W., and Fong, T.C.C. in Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

**fectious diseases** Infections cause a lowering of ascorbic acid levels in the
ma; and the absorption of this vitamin is reduced in diarrheal states.[7] 7. Goldsmith, G A.:
ence on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec.10) 1960.

**abetes** Diabetics, like all patients on restricted diets, require an extra source
itamins.[8] "Rigidly limiting the bread intake of the diabetic patient automatically
inates a large amount of thiamin from the diet. . . . There is some evidence of
rference with normal riboflavin utilization during catabolic episodes."[9]
can G. G.: Diseases of Metabolism 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

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mission field was discussed and members urged to give this program serious consideration.

Dr. Ferguson commended Dr. Jim Key who has served as Chairman of the Medical Society Section of the United Fund drive this year. The society is again 100 per cent in participation in this drive and Dr. Key and those who served with him have done an excellent job.

The applications of Drs. Don Menchetti and Carle Schroff were presented for vote and they were unanimously elected to membership.

Dr. F. T. Moseley, Chairman of the Public Policy Committee, discussed the Emergency Call System and urged participation in this service.

Dr. Kenneth Knabb distributed copies of pamphlets he has been mailing to his patients and urged the members to consider this project on an individual basis. Dr. Ferguson reported that Drs. Brown, H'Doubler, Lurie, Gose and Coller were presenting the Medical Hit Parade Show before the University of Missouri School of Medicine Alumni Association in Columbia tonight.

In the absence of the Program Chairman, Dr. Brown, Dr. Ferguson presented Mr. Oliver Field, Director of the Bureau of Investigation of the American Medical Association, Chicago, who discussed the work of his bureau. Following an extensive period of discussion, Dr. Ferguson expressed appreciation to Mr. Field for his presentation.

It was announced that the October presentation of "Medicine 1961," the public service television series sponsored by Crank Drug Company, would be on the subject "Blue Baby" and could be seen on KTTS-TV from 7:00 to 8:00 p.m., Monday, October 30, 1961.

It was announced that the Nominating Committee composed of Drs. Elkins, Siceluff, Tillman, Atkinson, Callaway, Jr., and John Westerfield Williams, will present their report at the November meeting and that members having suggestions for the committee should contact them in the near future. Nominations will be open from the floor at both the November and the December meeting, at which time the election will be held.

Dr. Glenn Turner reported that the November program will be under the sponsorship of the Education Services Department of Merck, Sharp and Dohme and that the speaker, selected by the Society Program Committee, will be Jerrold S. Liebermann, M.D., of New York City, who will discuss, "Practical Application of Anticoagulant Therapy."

There being no further business, the meeting was adjourned.

F. T. H'Doubler, Jr., M.D., *Secretary*

## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Butler-Ripley-Wayne County Medical Society

The Butler-Ripley-Wayne County Medical Society held its regular monthly meeting at the Westwood Hills Country Club on Nov. 21, 1961.

The speaker of the program was Dr. H. M. Hardwicke, the Acting Director of Public Health, who spoke on "The Changes in Medical Practice Over the Last Several Years, and Projected Into the Future." This was a well received talk by all those present. Dr. Hardwicke presented some excellent ideas and proposals for the Medical Society.

The doctors' wives met at this meeting and enjoyed a professional program and reorganized a local Auxiliary with the help of Mrs. J. Martyn Schattyn, President-Elect of the Woman's Auxiliary to the Missouri State Medical Association, and Mrs. John O'Connell, past president of the State Auxiliary, both of St. Louis County, and Mrs. J. F. Fairchild, Perryville, District Auxiliary Councilor. Mrs. Cyril Post was elected president of the local Auxiliary; Mrs. William Turner, vice president; Mrs. Ernest Tapp, secretary; Mrs. A. C. Parker, treasurer, and Mrs. William Robertson, reporter.

The usual medical society routine business was transacted during the organization of the Auxiliary. The meeting adjourned at 10:30 p.m.

E. T. Hansbrough, M.D., *Secretary*

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# Deaths

**Altringer, Mary P.**, M.D., 7219 East 87th St., Kansas City, a graduate of the University of Kansas, 1954; member of Jackson County Medical Society; aged 36; died November 2, 1961.

**Fries, William A.**, M.D., 4359 Taft Ave., St. Louis, a graduate of Washington University, 1883; member of St. Louis Medical Society; aged 100; died November 23, 1961.

**Holdenreid, William E.**, M.D., 2626 S. Kingshighway Blvd., St. Louis, a graduate of St. Louis University, 1908; member of St. Louis Medical Society; aged 88; died November 23, 1961.

**Irwin, W. F.**, M.D., Leasburg, a graduate of Marion-Sims College, 1897; member of Mid Missouri County Medical Society; aged 88; died November 14, 1961.

**Kinner, Helmuth M.**, M.D., 6137 S. Grand Ave., St. Louis, a graduate of Missouri Medical College, 1893; member of St. Louis Medical Society; aged 87; died October 31, 1961.

**McNamee, William F.**, M.D., 4018 S. Lindberg Blvd., St. Louis, a graduate of St. Louis University, 1929; member of St. Louis Medical Society; aged 57; died November 14, 1961.

**Schlueter, Newell W.**, M.D., 2 Litzinger Lane, Ladue, a graduate of St. Louis University, 1928; member of St. Louis Medical Society; aged 59; died November 14, 1961.

**Drews, Leslie C.**, M.D., 43 Hillvale Ave., Clayton, a graduate of Washington University, 1929; member of St. Louis Medical Society; aged 56; died October 25, 1961.

**Unterberg, Hillel**, M.D., 31 Hillvale Ave., Clayton, a graduate of St. Louis University and Barnes Hospital Medical School, 1902; member of St. Louis Medical Society; aged 80; died October 25, 1961.

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# MISSOURI STATE MEDICAL ASSOCIATION

## *104th Annual Session*

## Hotel Chase, St. Louis

## March 18, 19, 20, 21, 1962

### Sunday, March 18, 1962

1:30 p.m. House of Delegates. Chase Club.

3:30 p.m. Reference Committee meetings.

6:30 p.m. Committee on Diabetes and Missouri Diabetes Association Dinner. Hunt Room.

The Role of the Kidney in the Disposal of Insulin, Henry T. Ricketts, M.D., Chicago.

7:00 p.m. Dinner in Honor of Secretaries and Presidents of County Medical Societies and New Members. Khorassan Room.

### Monday, March 19, 1962

8:00 a.m. Registration. Hotel Chase Foyer.

9:00 a.m. Panel: What's New in Medicine, Surgery, Obstetrics, and Ear, Nose and Throat. Khorassan Room.
Moderator: C. Thorpe Ray, M.D., Columbia.
Panelists:
William F. Miller, M.D., Dallas
Denton A. Cooley, M.D., Houston, Texas.
Phil C. Schreier, M.D., Memphis, Tenn.
Joseph H. Ogura, M.D., St. Louis.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Inborn Errors in Metabolism, David Yi-Yung Hsia, M.D., Chicago.

11:30 a.m. Some Recent Developments in Surgery of Acquired Heart Disease Including Valve Replacement, Denton A. Cooley, M.D., Houston, Texas.

12:00 noon Committee on Maternal Welfare Luncheon. Regency Room.

12:00 noon. 50 Year Club Luncheon.

Medical Session. Khorassan Room.

2:00 p.m. Polyarteritis, John H. Talbott, M.D., Chicago.
Sponsored by the Missouri Society of Internal Medicine.

2:30 p.m. Diabetes Mellitus in the Elderly and Its Treatment with Hypoglycemic Agents, Henry T. Ricketts, M.D., Chicago.
Sponsored by the Missouri Diabetes Association.

3:00 p.m. Management of Pulmonary Emphysema, William F. Miller, M.D., Dallas, Texas

Surgical Session. Lido Room.

2:00 p.m. Diagnosis and Treatment of Cushing's Syndrome, H. William Scott, Jr., Nashville, Tenn.
Sponsored by the Missouri State Surgical Society.

2:30 p.m. To be announced.
Sponsored by the Missouri Heart Association.

3:00 p.m. To be announced.
Sponsored by the Missouri Chapter, American College of Chest Physicians.

3:30 p.m. Intermission to View Exhibits.

4:00 p.m. House of Delegates. Regency Room.

4:45 p.m. Reference Committee meetings.

6:30 p.m. Missouri Society of Internal Medicine Dinner. Lido Room.

6:30 p.m. Missouri State Surgical Society Dinner.

**Tuesday, March 20, 1962**

8:00 a.m. Registration, Hotel Chase Foyer.

9:00 a.m. Panel: Recent Developments in Infectious Disease. Khorassan Room.
Moderator: Carl V. Moore, M.D., St. Louis.
Panelists:
Robert J. Huebner, M.D., Bethesda, Md.
Michael L. Furcolow, M.D., Kansas City, Kan.
W. Barry Wood, M.D., Baltimore, Md.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Surgical Emergencies in Pediatrics, J. Eugene Lewis, M.D., St. Louis.

12:00 noon. University of Missouri Medical Alumni Association Luncheon. Zodiac Room.

2:00 p.m. Office Psychiatry for the Nonpsychiatrist, Jackson A. Smith, M.D., Chicago.

2:30 p.m. Cutaneous Manifestations of Systemic Disease, Adolph Rostenberg, M.D. Chicago.

3:00 p.m. Intermission to View Exhibits.

3:30 p.m. Panel: The Handicapped Child in Missouri. Khorassan Room.
Moderator: C. Arden Miller, M.D., Kansas City, Kan.
Panelists:
Carl J. Marienfeld, M.D., Columbia.
Frank B. Wilson, Ph.D., Brentwood.
A. R. Sharp, M.D., St. Louis.
D. Elliott O'Reilly, M.D., St. Louis.
Benjamin Milder, M.D., St. Louis.

3:30 p.m. Panel: Obstetric Hemorrhage and Shock. Lido Room.
Moderator:
Recognition and Prophylaxis of Obstetric Hemorrhage and Shock, A. C. Trueblood, M.D., St. Louis.
Use of Drugs in Obstetric Hemorrhage and Shock, Eugene G. Hamilton, M.D., St. Louis.
Use of Fluids and Blood Transfusion in Obstetric Hemorrhage, Seymour Monat, M.D., St. Louis.
Surgical Procedures Used in the Treatment of Obstetric Hemorrhage and Shock, Carl Dryer, M.S., St. Louis.
Sponsored by the St. Louis Gynecological Society.

7:30 p.m. Annual Banquet in Honor of Past Presidents. Starlight Roof. Edward R. Annis, M.D., Miami, Fla., Speaker.

**Wednesday, March 21, 1962**

7:30 a.m. Registration. Hotel Chase Foyer.

7:30 a.m. House of Delegates Breakfast Meeting. Chase Club.

9:00 a.m. Intermission to View Exhibits.

9:30 a.m. Medico-Economics Session. Khorassan Room.

11:00 a.m. Adjournment.

# New Members

**Richard O. Craig,** M.D., 1555 Swallow St., St. Louis, has become a member of St. Louis Medical Society. Dr. Craig is a native of Missouri, received his preliminary education at Westminster College, and his M.D. degree at St. Louis University in 1957.

**Robert C. Drews,** M.D., 508 N. Grand Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Drews is a native of Missouri, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1955.

**Russell C. Hanlon,** M.D., Medical Center, Columbia, has become a member of Boone County Medical Society. Dr. Hanlon is a native of Michigan, received his preliminary education at Albion College, and his M.D. degree at the University of Michigan in 1955.

**George E. Humphrey,** M.D., 7727 Folk Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Humphrey is a native of Illinois, received his preliminary education at St. Martins College, and his M.D. degree at St. Louis University in 1957.

**Warren J. Hunzicker,** M.D., 3520 Broadway, Kansas City, has become a member of Jackson County Medical Society. Dr. Hunzicker is a native of Kansas, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1944.

**James K. Mann,** M.D., 215 Oak St., Poplar Bluff, has become a member of Butler-Ripley-Wayne County Medical Society. Dr. Mann is a native of Missouri, received his preliminary education at Kansas City Junior College, and his M.D. degree at Missouri University in 1954.

**James M. Martin,** M.D., 4057 Louis Street, St. Louis, has become a member of St. Louis Medical Society. Dr. Martin is a native of Hawaii, received his preliminary education at B A Reed College, and his M.D. degree at Washington University in 1957.

**William D. Mayer,** M.D., 1000 Lakeshore Drive, Columbia, has become a member of Boone County Medical Society. Dr. Mayer is a native of Pennsylvania, received his preliminary education at Colgate University, and his M.D. degree at the University of Rochester, New York, in 1957.

**Dan B. Moore,** M.D., Hendrickson Clinic, Poplar Bluff, has become a member of Butler-Ripley-Wayne County Medical Society. Dr. Moore is a native of Illinois, received his preliminary education at Knox College, and his M.D. degree at Washington University in 1951.

**Hubert J. Van Peenen,** M.D., Medical Center, Columbia, has become a member of Boone County Medical Society. Dr. Van Peenen is a native of Cuba, received his preliminary education at Long Beach City College, and his M.D. degree at the University of California in 1954.

**Charles E. Workman,** M.D., Professional Building, Kansas City, has become a member of Jackson County Medical Society. Dr. Workman is a native of Kansas, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1952.

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## A.M.A. CLINICAL SESSION

*(Continued from page 40)*

consider the advisability of developing a training program for reserve medical officers.

### Awards and Donations

The A.M.A. Board of Trustees presented a special citation to the producers and cast of The Donna Reed Show for its "contribution to public understanding of the high ideals of the medical profession." Carl Betz, who portrays Dr. Alex Stone on the television show, received the award from Dr. Hugh H. Hussey, Jr., A.M.A. Board chairman, at the Wednesday Session of the House.

Contributions totaling $435,275.93 from physicians in six states were presented to the American Medical Education Foundation during the opening session on Monday.

### Registration

Final registration at the meeting reached a total of 6,138, including 2,976 physicians.

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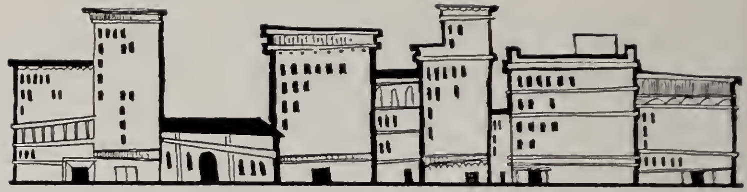
# From the Medical Schools



## ST. LOUIS UNIVERSITY

### Visiting Scientist

Dr. Helmut J. Bauer, professor of neurology at the University of Hamburg, will spend three months at the St. Louis University School of Medicine as a visiting scientist. He will be associated with Dr. Louis L. Tureen, Executive Secretary of the Section on Neurology.

An international figure in the field of neurochemistry, Dr. Bauer received his doctor of medicine degree from the University of Berlin, where he later took his internship and residency at the affiliated University Hospitals.

He is investigating the problem of multiple sclerosis from biochemical aspects, especially immunochemical problems related to multiple sclerosis.

While at St. Louis University, Dr. Bauer will continue work on this research specialty and will also engage in other neurochemical projects. He will teach medical students and interns in neurological studies and will give conferences and lectures in neurology.

Dr. Bauer is a member of the International Commission of Neurochemistry of the World Federation of Neurology. The commission is composed of a body of biochemists and neurologists from all parts of the world. Dr. Bauer represents Western Germany.

He has contributed scientific data to a number of periodicals and textbooks. His scientific papers and original monographs have included findings on "Spinal Fluid Chemistry, Industrial Poisoning as It Affects the Nervous System," and "Vitamin $B^{12}$ Disorders of the Nervous System," and many others.

### Lecture

Dr. Franklin M. Hanger, Emeritus Professor of Medicine at Columbia University and President Elect of the American College of Physicians and Surgeons, delivered the annual Albert Kuntz lecture sponsored by the Phi Chi medical fraternity at the St. Louis University School of Medicine.

Twenty-one years ago Dr. Hanger developed the cephalin flocculation test which has become known as the "Hanger Test," in the laboratories of experimental medicine of the Columbia University College of Physicians and Surgeons. The Hanger test is used throughout the world to detect necrosis of the cells of the liver parenchyma.

In his lecture, Dr. Hanger reviewed his experience in hepatic derangements as well as the progress which had been accomplished in the last 15 years in the understanding of the functions of the liver in health and disease. He pointed out that a great deal of interesting work remains to be done especially concerning the variation of the sensitivity of the liver of different individuals to various toxins and viruses.

Dr. Kuntz, an international authority on the autonomic nervous system, died in 1957. He was director of the department of anatomy and had been a member of the St. Louis University medical faculty for 44 years.

Dr. William Elliott, professor of biochemistry, delivered a paper entitled "A Four-Year Integrated Curriculum in Radiobiology" at the 72nd annual meeting of the Association of American Medical Colleges held in Montreal, Canada.

## WASHINGTON UNIVERSITY

### Promotions

Five staff members at Washington University School of Medicine have received promotions in professorial rank. Dr. Albert Roos has been awarded a full professorship with the title of research professor of anesthesiology. He will also retain directorship of the thoracic physiology laboratory. Promotions from assistant to associate professor have been awarded Drs. James E. Miller and Robert A. Moses in the department of ophthalmology; and Dr. William E. Powers in radiology. Dr. Andrew J. Gay has been promoted from instructor to assistant professor of ophthalmology.

### Mazur Fellowships

Three residents in pediatrics have been awarded Herbert A. Mazur fellowships. The fellowships will support each doctor's training in the field of emotional disturbances of children during the regular third year of residency training in pediatrics at St. Louis Children's Hospital. Receiving the awards were Dr. Daisilee H. Berry,

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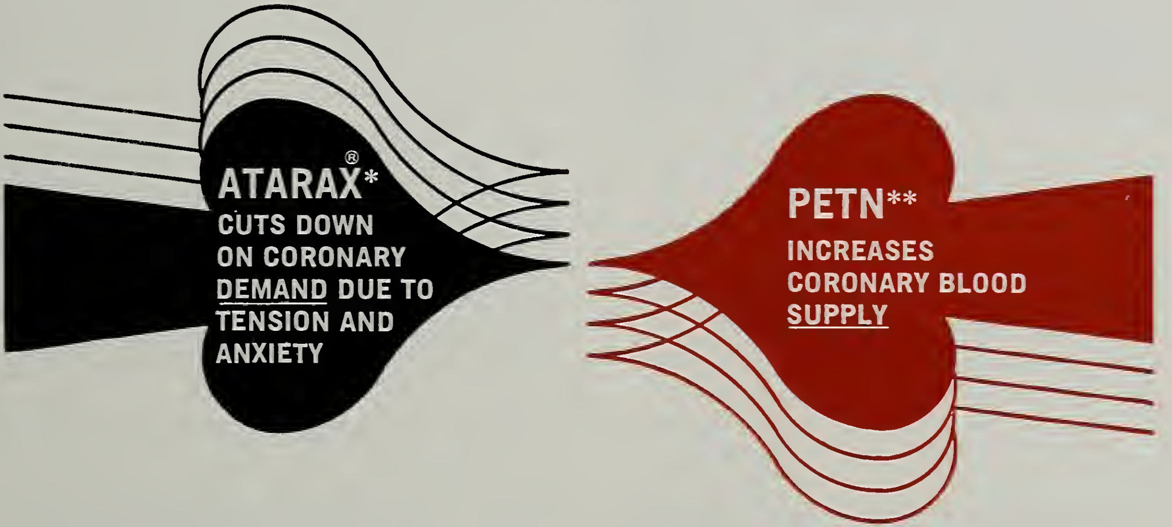
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1. Clark, T. E., and Jochem, G. G.: Angiology 11:361 (Aug.) 1960.

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Dr. Warren A. Weinberg and Dr. John A. Willoughby. The Dr. Herbert A. Mazur Children's Fund was incorporated in August of 1959 following the death of the St. Louis pediatrician for whom the Fund is named.

### Grants

Dr. Luis Glazer, assistant professor of biological chemistry, has been awarded a $25,000 research grant from the National Science Foundation. He will study the synthesis and metabolism of thymidine diphosphate thanmnose. Dr. Martin Silberberg, associate professor of pathology, has been awarded a $9,324 grant from the United States Public Health Service for research in aging.

### Meetings, Appointments, Visitors

Dr. George Ulett, professor of psychiatry, has accepted an appointment as temporary head of the Missouri Division of Mental Disease. Dr. Ulett has been serving as medical director of Malcolm Bliss Mental Health Center in St. Louis.

Dr. Clinton W. Lane, professor of clinical medicine, has been named president of the American Board of Dermatology. He will preside at the meeting of the board next fall in Ann Arbor.

Several faculty members have been speakers at area medical meetings recently. Among speakers at a symposium on "The Management of the Alcoholic" were Dr. George Ulett and Dr. David J. Pittman, research associate professor of sociology in the department of psychiatry and neurology. Dr. Alexis Hartmann, Jr., assistant professor of pediatrics, spoke at a meeting of the Missouri Association of Nurse Anesthetists. Dr. Arthur H. Stein, Jr., associate professor of orthopedic surgery, and Dr. George Scheer, instructor in clinical orthopedic surgery, were on a panel at a meeting of the St. Louis Surgical Society. Panelists for a meeting of the Tuberculosis and Health Society of St. Louis included Dr. C. Howe Eller, professor of public health in the department of preventive medicine. Dr. A. V. Chaklin, chief of the cancer unit of the World Health Organization, visited Washington University to talk with faculty members and view research facilities. Dr. Chaklin is also scientific secretary of the committee of the Soviet Academy of Medical Sciences dealing with malignant tumors and formerly was a health official in Leningrad. Dr. Bjorn Nordenstrom, di-

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rector of the department of thoracic radiology at the Karolinska Institute in Stockholm, delivered two lectures in the medical school and participated in staff conferences. Dr. Nordenstrom spoke on facets of pulmonary circulation.

### Hospital Film

A film dealing with activities of the Washington University-Barnes Hospital Medical Center was shown over a television station in St. Louis in November. The show, entitled "In Mortal Combat," was sponsored by the Laclede Gas Company. It featured a dramatized situation but used hospital staff and faculty for major roles. Included in the presentation was a 15-minute segment showing an actual operation for removal of a brain tumor.

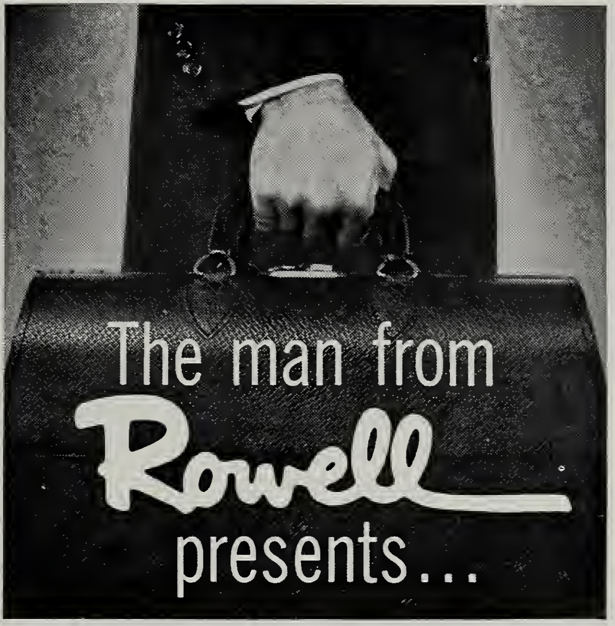
### Expansions

The cardiovascular and pulmonary divisions of the department of medicine at Washington University School of Medicine are now in the process of expending their clinical and research facilities. Total expenditures for the two divisions for the year ending June 1962 will exceed $100,000, which includes remodeling, new equipment and allotment for additional personnel for the cardiovascular division. Funds for the cardiovascular division are being supplied by the National Institutes of Health. The pulmonary laboratory was equipped in part from the John A. Saxton, Jr., Memorial Fund. Dr. Saxton, a 1934 graduate of the School of Medicine, later served on the faculty and was laboratory director of the hospital division of the City of St. Louis before his death in 1956. Two rooms have been remodeled for laboratory use for the cardiovascular division and electronic equipment for measuring impulse formation in the heart has been purchased. Dr. John R. Smith is director of the division with Dr. Brent Parker as assistant director. Reorganization of the pulmonary division under Dr. Kaye H. Kilburn will include facilities for tests of breathing function on hospitalized and outpatients and research on the breathing mechanism. Laboratory equipment has been installed and two projects are to begin this year under Dr. Kilburn's direction. One study will assess how airways function to provide uniform ventilation of the lungs. The second will evaluate changes in pulmonary circulation produced by lung disease.

## UNIVERSITY OF MISSOURI

### Meetings

A seminar on "Pediatrics Urological Problems" was held at the University of Missouri Medical



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Center, November 15, devoted to a comprehensive study of urinary tract infections and obstructive uropathy in children. Various phases of the subject were discussed by the guest faculty and a combined panel of pediatricians from the Medical Center and guest urologist discussed clinical and basic aspects. Recent advances in therapy were presented and illustrated by experiences at the Medical Center.

University of Missouri participants included Dean Vernon E. Wilson, M.D.; Constantine S. Anast, M.D., associate professor of pediatrics; Clement E. Brooke, M.D., associate professor of pediatrics; James Cope, M.D., clinical associate professor of surgery (urology); Robert L. Jackson, M.D., professor and chairman of the department of pediatrics; Gilbert Ross, M.D., instructor in surgery (urology); Harry Stoeckle, M.D., associate professor of pediatrics; and Ian M. Thompson, professor of surgery (urology).

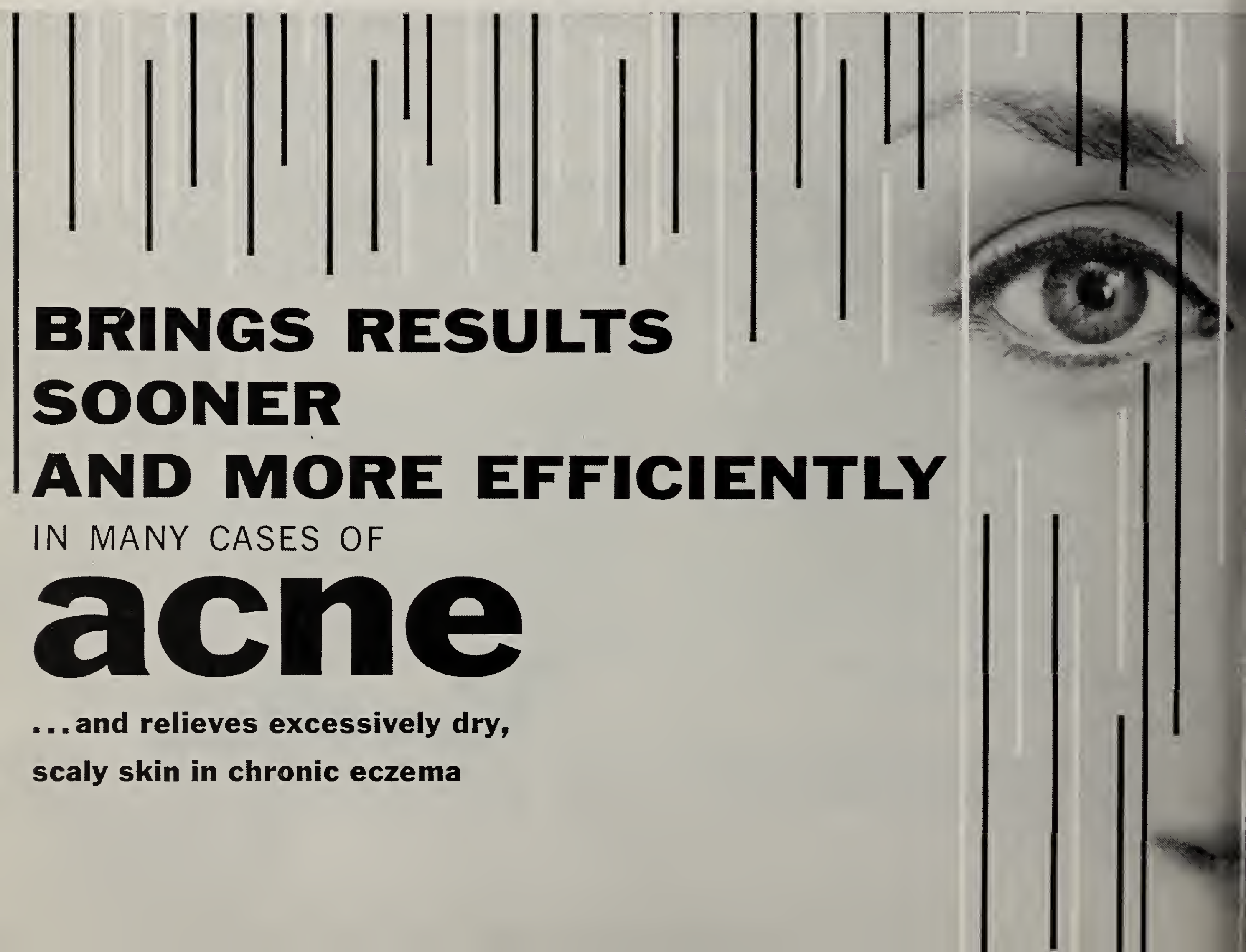
The guest faculty members were Frank Bicknell, M.D., associate professor of urology at Wayne State University and chief of the division of urology at Herman Keifer Hospital, Detroit; James W. Headstream, M.D., professor of surgery (urology) at the University of Arkansas School of Medicine, Little Rock; Willoughby E. Kittredge, M.D., professor of urology at Tulane University School of Medicine and director of the department of urology, Ochsner Clinic, New Orleans; and Henry M. Weyrauch, M.D., urologist-in-chief, Presbyterian Hospital and Medical Center, San Francisco.

### Trips and Talks

Dr. Herbert E. Brown, associate professor of anatomy, presented a paper entitled "The periodicity of Leucocytes in Normal and Adrenalectomized Mice," at a meeting of the New York Academy of Sciences and the Foundation for the Study of Cycles, Nov. 8 through 11, in New York City.

Dr. F. Eugene Doenges, associate professor of anatomy, attended the first annual meeting of the Southern Society of Anatomists, Nov. 3 and 4, 1961, at Tulane University, New Orleans, where he reported on "A Neurophysiological Technique for Studying a Small Number of Fibers That Join a Larger Nerve."

Dr. Frank B. Engley, Jr., professor and chairman of microbiology, presented two lectures at the St. Louis Medical Society Basic Science Postgraduate Course Oct. 23 and 30 on "Antisepsis, Disinfection and Sterilization," and "A Micro-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IN MANY CASES OF
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biologist Looks at Cross Infection." The meeting was held in St. Louis.

Dr. James T. Barrett, associate professor of microbiology, presented "Immunologic Tolerance" and "Applications of Fluorescent Antibody" at the course Oct. 23 and Nov. 13, and Dr. Goldberg lectured on November 6. Dr. Goldberg, associate professor of microbiology, also attended a conference on "Antimicrobial Agents" in New York during the week of October 30 and presented a research paper concerned with the effect of long-term low-level antibiotics on the development of resistant bacteria.

Dr. Donald P. Durand, assistant professor of microbiology lectured on "Recent Trends in Virology" to the course sponsored by the St. Louis Medical Society, Nov. 6, in St. Louis. Dr. Michael H. Ivey, assistant professor of microbiology also lectured on "Epidemiology of Parasitic Diseases of Current Interest," on Oct. 30. He also attended the American Society of Tropical Medicine and Hygiene and presented a paper with R. D. Lindgren on "Studies on Virulence of Trichomonas Vaginalis in Mice," in Washington, D. C. November 1-4.

Dr. David G. Hall, M.D., assistant professor of obstetrics-gynecology, and chairman of the department, visited the universities of Oklahoma and Mississippi and toured the departments of obstetrics and gynecology at these universities Oct. 28-Nov. 1. Dr. Hall and Herbert J. Schmidt, M.D., assistant instructor in obstetrics-gynecology, attended the Maternal Mortality Conference in Kansas City, Oct. 6.

Dr. John Porterfield, assistant instructor in pathology, Dr. M. Pinson Neal, professor emeritus of pathology, and Miss Mary Elliott, MT ASCP, discussed medical technology training at the University of Missouri with science teachers and science student groups at Central College, Fayette, Mo., November 9, 1961. Student groups were members of Alpha Epsilon Delta, (pre-medical fraternity), Beta Beta Beta (National Biological Student Society) and the Chemistry Club (a local of the American Chemical Society). A film, "Careers in Medical Technology" was shown to the group.

Dr. Robert L. Jackson, professor and chairman of pediatrics, attended the National Research Council Food and Nutrition Board meeting in Washington, D. C., November 6-10, and while there also attended meetings of three committees of the Board, including the Infant Nutrition Committee, of which he is chairman. At

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this session, the committee prepared and presented to the board for approval, recommended protein allowances for infants.

Dr. Constantine S. Anast, associate professor of pediatrics, attended a pediatric education meeting sponsored by the Midwest Society for Pediatric Research in Minneapolis, Minn., Oct. 31 to Nov. 1. General pediatric papers were presented.

Drs. Roy A. Westerfeld, and Henry Clever, assistant instructors in pediatrics, attended the Southwest Medical Association Meeting in Dallas, Tex., November 6-9.

Dr. James M. A. Weiss, M.D., professor and chairman of the department of psychiatry, presented a report on the importance of geriatric training in psychiatric residency programs before the annual meeting of the committees and Council of the American Psychiatric Association in Washington, D. C., held Nov. 3 and 4.

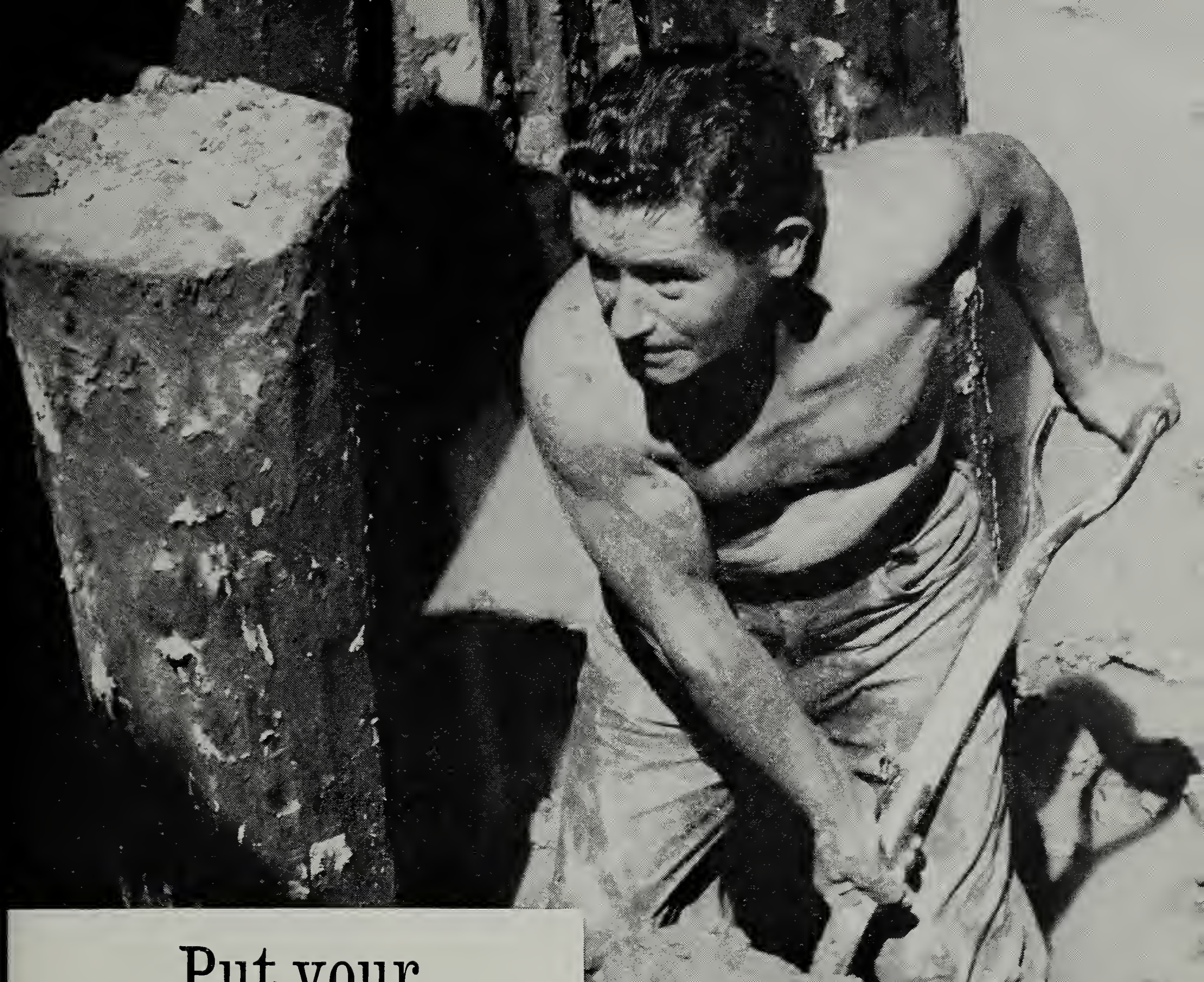
While in Washington Dr. Weiss also attended the 68th annual meeting of the Association of Military Surgeons of the United States. In addition, he conferred with officials of the National Institute of Mental Health of the U. S. Public Health Service, with regard to research projects in the field of geriatric psychiatry.

Dr. Robert E. Froelich, M.D., assistant professor of psychiatry, attended a meeting in St. Louis Nov. 12, sponsored by the Hoffman-La-Roche Company. The topic of discussion was "Treatment of the Alcoholic Patient."

John J. Modlin, M.D., professor and chairman of the department of surgery, was a guest speaker at the "Cancer Seminar" sponsored by the Penrose Cancer Hospital in Colorado Springs, Colo., Nov. 10 and 11. Dr. William Meissner and Dr. Richard Schatzki of Boston were the other guest speakers. This year's program centered on tumors of the stomach and was attended by approximately 700 pathologists, radiologists and surgeons.

Dr. Modlin also attended the 13th annual Scientific Assembly of the Missouri Academy of General Practice in Kansas City Nov. 5, where he spoke on the Surgery Symposium "Surgical Treatment of Cancer of the Skin." He was also a participant in a panel discussion on surgery with Dr. Philip Thorek of Chicago, Dr. Ralph Bowers of Memphis and Dr. Fred Kittle of Kansas City.

Hugh E. Stephenson, Jr., M.D., professor of surgery, presented a paper on "Experiences With Bronchial Carcinoma Among a Rural Population," to the Southern Chapter of the American College of Chest Physicians in Dallas, Tex., from Nov. 4-7.



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Ian Thompson, M.D., professor of surgery (urology) presented the following topics at the Oklahoma City Clinical Society Meeting Oct. 23: "Practical Approach to Urinary Incontinence"; "Urologic Emergencies in the Pediatric Age Group"; "Speciality—Cutaneous Interposition Principle for Conduit Certain Urethral Diversion." He also presented papers on "Stop Flow Analysis and Incontinence" and "Cine Studies" at the Kimbrough Urological Meeting in San Antonio, Tex., Nov. 7.

November 6, Drs. Laszlo Kovacsi, assistant instructor in surgery (urology), and Gilbert Ross, instructor in surgery (urology), attended SMA Meeting in Dallas, where they presented an exhibit on cystinuria, and a paper on current status of urinary diversion. Nov. 1 through 3, they spent three days at St. Joseph State Hospital No. 2 for consultation and operations. This was the first extended residency program by the Division of Urology with the State Hospital No. 2.

Dr. John C. Schuder, associate professor of surgery (biophysics), and Dr. James Randall of the department of physiology were joint speakers at the student meeting of the A.I.E.E. and I.R.E. groups Nov. 14, to give the engineering students some insight into current research problems in the field of biomedical electronics, the opportunity for obtaining an education in the field, and the scope of possible professional employment.

Mr. John Perry, associate director of the university hospital, Dr. Aimee Moore, director of nutrition and dietetics, and Mrs. Byrdine Tuthill, assistant director of nutrition and dietetics, and selected dietitians, attended the annual convention of the American Dietary Association the week of October 23 in St. Louis.

Mr. Perry and Mr. J. Barton Boyle, assistant director of university hospital, attended the Medical Schools-Teaching Hospital Section of the meeting of the Association of American Medical Colleges November 10-13 in Montreal, Canada.

On October 27-28, William K. Beatty, Medical Librarian and associate professor of medical bibliography, attended the fall meeting of the Mid-West Regional Group of the Medical Library Association in Rochester, Minn. While there he presented a talk on "Book Selection by the Medical Librarian."

Mr. Beatty also attended the annual meeting of the American Institute for Documentation in Boston, Nov. 6-8.

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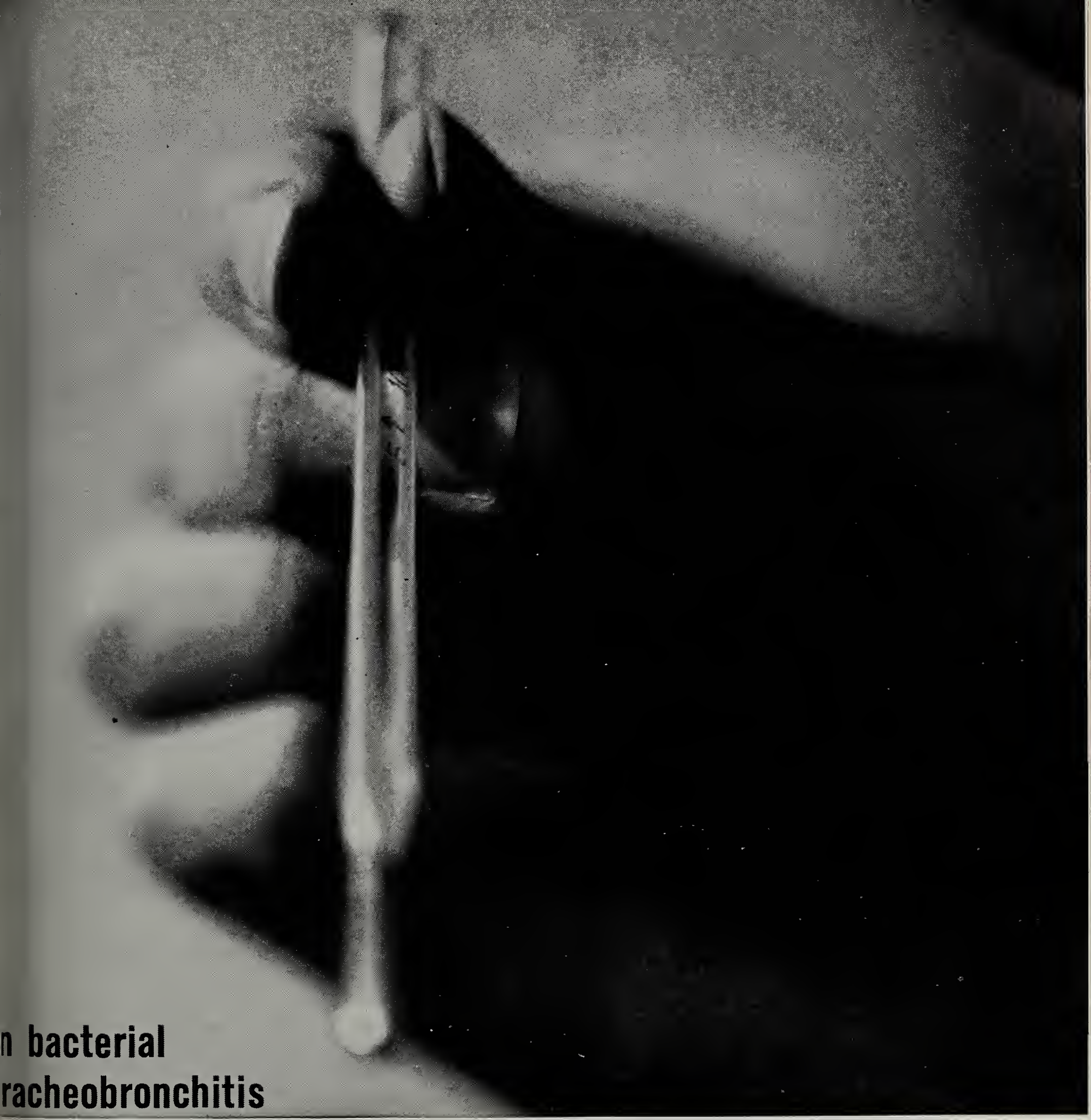

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**Usual Adult Dosage:** 1 or 2 capsules 3 or 4 times a day.

**Side Effects:** Panmycin Phosphate has a very low order of toxicity comparable to that of the other tetracyclines and is well tolerated clinically. Side reactions to therapeutic use in patients are infrequent and consist principally of mild nausea and abdominal cramps.

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**Caution:** Since the use of any antibiotic may result in overgrowth of nonsusceptible organisms, constant observation of the patient is essential. If new infections appear during therapy, appropriate measures should be taken.

Total and differential blood counts should be made routinely during prolonged administration of Albamycin. The possibility of liver damage should be considered if a yellow pigment, a metabolic by-product of Albamycin, appears in the plasma. Panalba should be discontinued if allergic reactions that are not readily controlled by antihistaminic agents develop.

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# Missouri Medicine in Review

## FORTY YEARS AGO

Dr. G. W. Hawkins of Salisbury was elected vice president of the Wabash Railway Surgeons' Association at its meeting in St. Louis last month.

Dr. Vilray P. Blair of St. Louis was elected vice president of the Southern Surgical Association and also vice president of the Western Surgical Association.

Dr. H. E. Pearse, Kansas City, chairman of the committee on hospitals of the State Medical Association, inspected the hospitals of Jasper County, December 6, 1921.

Dr. R. G. Keller of Freeman was stricken with smallpox during the epidemic in December, and died from the disease December 21. His death leaves the community without a physician.

The semi-centennial, or jubilee, meeting of the American Public Health Association in New York is remarkable for the reason that it marks the fiftieth anniversary of the founding of the Association. The leading figure in the meeting and the president of the public health association for the year just past was Dr. Mazyck P. Ravenel, Professor of Preventive Medicine in the University of Missouri.

Dr. G. P. Ard, Health Supervisor in charge of eleemosynary institutions, announced changes in the medical personnel of several state hospitals, as follows: Dr. T. B. M. Craig was not reappointed superintendent of State Hospital No. 3, Nevada, Dr. Porter Williams being transferred from St. Joseph to Nevada, and Dr. A. C. Vickrey of St. Louis was appointed superintendent of State Hospital No. 2, at St. Joseph.

## TWENTY-FIVE YEARS AGO

Perry, Chariton and Ste. Genevieve county medical societies have paid dues for all their members for 1937. Last year Chariton County Medical Society was the only society in which all members paid dues previous to January 1. Perry County Medical Society was the first society to remit all dues this year, all members having paid by November 27, 1936. Chariton County Medical Society reported all 1937 dues paid on December 1, 1936. Chariton County Medical Society reported all 1937 dues paid on December 1, 1936, and Ste. Genevieve County Medical Society reported all dues paid on December 15, 1936. These county societies have been placed on the Honor Roll.

Dr. Elmer D. Twyman and Dr. Thomas G. Orr, Kansas City, and Dr. Fred W. Bailey, St. Louis, appeared on the program of the forty-sixth annual meeting of the Western Surgical Association which convened in Kansas City December 11 and 12, 1936. Dr. Fred W. Bailey, St. Louis, was elected President of the association for 1937 and Indianapolis was chosen as the next place of meeting.

Dr. Edwin C. Ernst, St. Louis, was presented with a gold medal by the Radiological Society of North America for his research in the treatment of cancer and in measuring units of the roentgen ray. The award was made on November 3 at the meeting of the society in Cincinnati. Dr. Ernst has been president of the Radiological Society of North America and the American Radium Society and has been chancellor of the American College of Radiology.

Dr. Elias Potter Lyon, Dean Emeritus of Minnesota State University Medical School and former Dean and Professor of Physiology of St. Louis University Medical School, delivered the annual Alpha Omega Alpha address at St. Louis University School of Medicine on December 3. His subject was "William Beaumont, the Backwoods Physiologist."

St. Louis Medical Society, following the precedent set by several other medical organizations, has created a Medico-Legal Committee and empowered it with authority to proceed toward the solution of the problem of corporate medical practice in St. Louis. It has been definitely decided in some courts that the corporate practice of medicine is illegal. What constitutes the cor-

*(Continued on page 79)*

porate practice of medicine is of course a question for the courts to decide.

## TEN YEARS AGO

Los Angeles was the scene of the fifth Annual Clinical Session of the American Medical Association, December 4 through 7. Approximately 4,000 physicians from all parts of the country registered. A. C. Yoder, M.D., Goshen, Indiana, an 84 year old physician, was elected "family doctor" of the year by the House of Delegates.

The following physicians were received into fellowship of the American College of Surgeons at a meeting on November 9: Drs. John E. Burch, Joplin; Jack G. Miller, St. Charles; Bernard L. Murphy, Hannibal; Thompson E. Potter, St. Joseph; Garland A. Reynolds, Cape Girardeau; Mitchell D. Johnson, Ferguson; Fred R. Farthing, Robert W. Maher and Edward Marcus, Springfield; John H. Gaskins and Frederick J. McCoy, Kansas City; Edward M. Cannon, Charles L. Eckert, Heinz E. Haffner, William Carl Stude and William L. Tomlinson, St. Louis, was appointed chairman of the Board of Regents.

Everett D. Sugarbaker, M.D., Jefferson City, was elected president of the Missouri Division, American Cancer Society, at a meeting held in St. Louis October 31 and November 1. E. Kip Robinson, M.D., Kansas City, was elected a division delegate.

## WOMAN'S AUXILIARY

(Continued from page 16)

organizational information, and the various state chairman will give program ideas. Our state organization warmly welcomes any new group and your membership means you are a member of the Woman's Auxiliary to the American Medical Association, with 90,000 members—all joining with you in furthering the aims and ideals of the medical profession. Your single membership is extremely powerful because while a voice alone may not be heard, 90,000 women scattered in fifty states can create a power for good that cannot be ignored.

The year ahead is critical for American medicine, but not as critical for medicine as for those medicine seeks to serve. In our world of tension, we realize our survival may depend upon our knowledge of what we can do to help ourselves. If the final alert ever sounds it will be too late to start preparation.

Our Nation is going all out in preparation for war, hoping this will have a deterrent effect. I believe, also, we should go all out for peace, in the hope this will have a salutory effect. The financial strain of our war preparation makes it imperative we evaluate all our expenditures. We were troubled to hear our President say that he did not believe our senior citizens should be "subjected to the indignity of a means test" to determine whether or not they needed financial assistance with medical costs.

I know our senior citizens would be greatly alarmed about the welfare of our country, if they felt all government expenditures were being made "without the indignity of a means test."

We know these are critical days for our Nation and we are willing to make sacrifices where needed, but we must demand the "Means Test" so we can be sure the sacrifice is not in vain. Individual responsibility and integrity is our key for national and personal survival, and the basis of our freedom.

The Auxiliary wants and needs every doctor's wife in Missouri to join with us. We are asked to join many organizations, but our Auxiliary is the only one we can join that enables us to work so closely with the medical profession in all areas that affect the health and welfare of our communities. Through Auxiliary we gain county, state and national assistance that enables us to serve more effectively in our home communities. Won't you write us today?

## ADENOMA OF BRUNNER'S GLANDS

(Continued from page 37)

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**Emotional control regained . . . a family restored . . .**
**thanks to a physician and 'Thorazine'**

During the past seven years, 'Thorazine' has become the treatment of choice for moderate to severe mental and emotional disturbances, because it is:

- specific enough to relieve underlying fear and apprehension
- profound enough to control hyperactivity and excitement
- flexible enough so that in severe cases dosage may be raised to two or three times the recommended starting level

Experience in over 14,000,000 Americans confirms the reassuring fact that, in most patients, the potential benefits of 'Thorazine' far outweigh its possible undesirable effects.

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Because of its pronounced calming effect, 'Thorazine' is an outstanding agent for patients with mental and emotional disturbances, particularly those with symptoms of agitation and hyperactivity. In severe cases, initial use of intramuscular administration may be desirable to control symptoms promptly.

Before prescribing 'Thorazine' for other indications than those given below, the physician should be familiar with the dosage, side effects, cautions and contraindications for such uses. This information is available in the *Thorazine® Reference Manual* and *Physicians' Desk Reference,* and from your SK&F representative or your pharmacist.

## ADMINISTRATION AND DOSAGE

Dosage should always be adjusted to the response of the individual and according to the severity of the condition. It is important to increase dosage until symptoms are controlled or side effects become troublesome. In emaciated or senile patients, dosage increases should be made more gradually than in other patients.

## ADULT DOSAGE

**Mental and Emotional Disturbances** (e.g., agitation, excitement, or anxiety)—*Starting oral dosage* is 10 mg. t.i.d. or q.i.d., or 25 mg. b.i.d. or t.i.d. After a day or two, dosage may be increased by increments of 20 mg. to 50 mg. daily, at semiweekly intervals, until maximum clinical response is achieved. Continue dosage at this level for at least two weeks; then it can usually be reduced to a maintenance level. A daily dosage of 200 mg. is "average," but some patients may require substantially higher dosages. Discharged mental patients, for example, may require daily dosages as high as 800 mg. *Starting intramuscular dose* is 25 mg. (1 cc.). If necessary, and if no hypotension occurs, repeat the initial dose in one hour. Subsequent dosages should be oral, starting at 25 mg. to 50 mg. t.i.d.

**Alcoholism—Severely agitated patients:** *Starting intramuscular dose* is 25 mg. to 50 mg. (1-2 cc.). Repeat initial dose if necessary and if no hypotension occurs. Start subsequent oral dosages at 25 mg. to 50 mg. t.i.d. **Agitated but manageable patients:** *Starting oral dose* is 50 mg., followed by 25 mg. to 50 mg. t.i.d. For ambulatory patients with withdrawal symptoms or sober chronic alcoholics, *starting oral dosage* is 10 mg. t.i.d. or q.i.d., or 25 mg. b.i.d. or t.i.d. Patients in a stuporous condition should be allowed to sleep off some of the effects of the alcohol before 'Thorazine' is administered.

## CHILDREN'S DOSAGE

**For Behavior Disorders**—*Oral dosage* is on the basis of ¼ mg./lb. of body weight q4-6h, until symptoms are controlled (i.e., for 40 lb. child—10 mg. q4-6h). *Rectal dosage* is on the basis of ½ mg./lb. of body weight q6-8h, p.r.n. (i.e., for 20-30 lb. child—half of a 25 mg. suppository q6-8h). *Intramuscular dosage* is on the basis of ¼ mg./lb. of body weight q6-8h, p.r.n. In children up to 5 years (or 50 lbs.)—not over 40 mg./day; in children 5-12 years (or 50-100 lbs.)—not over 75 mg./day except in extreme unmanageable cases. In severe cases, higher dosages than those recommended above may be necessary. In such cases, 50-100 mg. daily has been used and, in older children, as much as 200 mg. daily or more may be required.

## IMPORTANT NOTES ON INJECTION

Except for acute ambulatory cases, parenteral administration should generally be reserved for bedfast patients. Parenteral administration should always be made with the patient lying down and remaining so for at least ½ hour afterward because of possible hypotensive effects. The injection should be given *slowly, deep* into the upper outer quadrant of the buttock. If irritation and pain at the site of injection are problems, dilution of 'Thorazine' Injection with physiologic saline solution or 2% procaine solution may be helpful. Subcutaneous administration is not advisable, and care should be taken to avoid injecting undiluted 'Thorazine' Injection into a vein. Intravenous administration is recommended only for severe hiccups and surgery.

'Thorazine' Injection should not be mixed with other agents in the syringe. Because contact dermatitis has been reported with 'Thorazine', nurses or others giving frequent injections should avoid getting the solution on hands or clothing. 'Thorazine' Injection should be protected from light, since exposure may cause discoloration. Slight yellowish discoloration will not alter potency or efficacy. If markedly discolored, the solution should be discarded.

## SIDE EFFECTS

The drowsiness caused by 'Thorazine' is usually mild to moderate and disappears after the first or second week of therapy. If, however, drowsiness is troublesome, it can usually be controlled by lowering the dosage or by administering small amounts of dextro amphetamine.

Other side effects reported occasionally are dryness of the mouth, nasal congestion, some constipation, miosis in a few patients and, very rarely, mydriasis.

Mild fever (99°F.) may occur occasionally during the first days of therapy with large intramuscular doses.

Some patients have an increased appetite and gain weight, but usually reach a plateau beyond which they do not gain.

## CAUTIONS

**Jaundice:** The over-all incidence of jaundice due to 'Thorazine' has been low—regardless of indication, dosage, or mode of administration. It appears to be related to duration of therapy. Few cases have occurred in less than one week or after six weeks. The jaundice that has occurred mimics the obstructive type, is without parenchymal damage, and is usually promptly reversible upon the withdrawal of 'Thorazine'. Although the mechanism is not clearly understood, most investigators conclude that it is a sensitivity reaction in susceptible individuals.

There is no conclusive evidence to indicate that pre-existing liver disease makes the patient more susceptible to jaundice. (Patients with known alcoholic cirrhosis have been treated with 'Thorazine' without further alteration of liver function.) Nevertheless, 'Thorazine' should be used with due consideration in a patient with liver disease.

If a patient on 'Thorazine' suddenly develops fever with grippe-like symptoms, his serum should be tested for increased bilirubin or his urine for the presence of bile. If any of these tests are positive, 'Thorazine' should be discontinued.

Because detailed liver function tests of 'Thorazine'-induced jaundice give a picture which mimics extrahepatic obstruction, exploratory laparotomy should be withheld until sufficient studies confirm extrahepatic obstruction.

**Agranulocytosis:** Agranulocytosis, although rare, has been reported. Patients should be observed regularly and asked to report at once the sudden appearance of sore throat or other signs of infection. If white blood counts and differential smears give an indication of cellular depression, the drug should be discontinued, and antibiotic and other suitable therapy should be instituted.

Because most reported cases have occurred between the fourth and the tenth weeks of treatment, patients on prolonged therapy should be observed particularly during that period.

A moderate suppression of total white blood cells, sometimes observed in patients on 'Thorazine' therapy, is not an indication for discontinuing 'Thorazine' unless accompanied by other symptoms.

**Potentiation:** 'Thorazine' prolongs and intensifies the action of many central nervous system depressants such as anesthetics, barbiturates and narcotics. Consequently, it is advisable to stop administration of such depressants before initiating 'Thorazine' therapy. Later the depressant agents may be reinstated, starting with low doses, and increasing according to response. Approximately ¼ to ½ the usual dosage of such agents is required when they are given in combination with 'Thorazine'. (However, 'Thorazine' does not potentiate the anticonvulsant action of barbiturates. In patients who are receiving anticonvulsants, the dosage of these agents—including barbiturates—should not be reduced if 'Thorazine' is started. Rather, 'Thorazine' should be started at a very low dosage and increased, if necessary.)

**Hypotensive Effect:** Postural hypotension and simple tachycardia may be noted in some patients. In these patients, momentary fainting and some dizziness are characteristic and usually occur shortly after the first parenteral dose, occasionally after a subsequent parenteral dose—very rarely after the first oral dose. In most cases, prompt recovery is spontaneous and all symptoms disappear within ½ to 2 hours with no subsequent ill effects. Occasionally, however, this hypotensive effect may be more severe and prolonged, producing a shock-like condition.

In consideration of possible hypotensive effects, the patient should be kept under observation (preferably lying down) for some time after the initial parenteral dose. If, on rare occasions, hypotension does occur, it can ordinarily be controlled by placing the patient in a recumbent position with head lowered and legs raised. If a vasoconstrictor is required, 'Levophed' and 'Neo-Synephrine'★ are the most suitable. Other pressor agents, including epinephrine, are not recommended because phenothiazine derivatives may reverse the usual elevating action of these agents and cause a further lowering of blood pressure.

**Antiemetic Effect:** The antiemetic effect of 'Thorazine' may mask signs of overdosage of toxic drugs and may obscure diagnosis of conditions such as intestinal obstruction and brain tumor.

**Dermatological Reactions:** Dermatological reactions have been reported. Most have been of a mild urticarial type, suggesting allergic origin. Some appear to be due to photosensitivity, and patients on 'Thorazine' should avoid undue exposure to the summer sun.

**Neuromuscular (Extrapyramidal) Reactions:** With very high doses of 'Thorazine', as frequently used in psychiatric cases over long periods, a few patients have exhibited neuromuscular (extrapyramidal) reactions which closely resemble parkinsonism. Such symptoms are reversible and usually disappear within a short time after the dosage has been decreased or the drug temporarily withdrawn. These reactions can also be controlled by the concomitant administration of an anti-parkinsonism agent (see *Physicians' Desk Reference*). Depending on the severity of the symptoms, suitable supportive measures such as maintaining a clear airway and adequate hydration should be employed. When 'Thorazine' is reinstituted, it should be at a lower dosage.

**Lactation:** Moderate engorgement of the breast with lactation has been observed in female patients receiving very large doses of 'Thorazine'. This is a transitory condition which disappears on reduction of dosage or withdrawal of the drug.

## CONTRAINDICATIONS

'Thorazine' is contraindicated in comatose states due to central nervous system depressants (alcohol, barbiturates, narcotics, etc.) and also in patients under the influence of large amounts of barbiturates or narcotics.

## SUPPLIED

**Tablets,** 10 mg., 25 mg., 50 mg. and 100 mg., in bottles of 50, 500 and 5000; 200 mg., for use in mental hospitals, in bottles of 500 and 5000. (Each tablet contains 10 mg., 25 mg., 50 mg., 100 mg., or 200 mg. of chlorpromazine hydrochloride.)

**Spansule® capsules,** 30 mg., 75 mg., 150 mg. and 200 mg., in bottles of 30, 250 and 1500; also 300 mg., in bottles of 30 and 1500. (Each 'Spansule' capsule contains 30 mg., 75 mg., 150 mg., 200 mg., or 300 mg. of chlorpromazine hydrochloride.)

**Ampuls,** 1 cc. and 2 cc. (25 mg./cc.), in boxes of 6, 100 and 500. (Each cc. contains, in aqueous solution, 25 mg. of chlorpromazine hydrochloride; 2 mg. of ascorbic acid; 1 mg. of sodium bisulfite; 1 mg. of sodium sulfite; 6 mg. of sodium chloride.)

**Multiple-dose Vials,** 10 cc. (25 mg./cc.), in boxes of 1, 20 and 100. (Each cc. contains, in aqueous solution, 25 mg. of chlorpromazine hydrochloride; 2 mg. of ascorbic acid; 1 mg. of sodium bisulfite; 1 mg. of sodium sulfite; 1 mg. of sodium chloride; 2% benzyl alcohol as preservative.)

**Syrup,** 10 mg./teaspoonful (5 cc.), in 4 fl. oz. bottles. (Each 5 cc. contains 10 mg. of chlorpromazine hydrochloride.)

**Suppositories,** 25 mg. and 100 mg., in boxes of 6. (Each suppository contains 25 mg. or 100 mg. of chlorpromazine; glycerin, glyceryl monopalmitate, glyceryl monostearate, hydrogenated cocoanut oil fatty acids, hydrogenated palm kernel oil fatty acids, lecithin.)

**Concentrate** (for hospital use), 30 mg./cc., in 4 fl. oz. bottles, in cartons of 12 and 36, and in gallon bottles. (Each cc. contains 30 mg. of chlorpromazine hydrochloride.)

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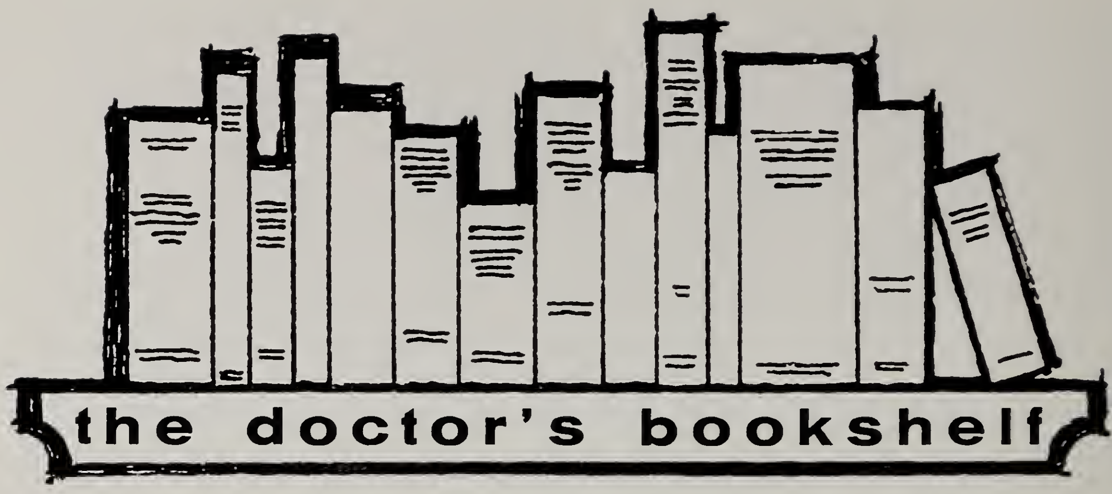

# the doctor's bookshelf

## BOOKS RECEIVED

Thoracic Diseases Emphasizing Cardiopulmonary Relationships, by Eli H. Rubin, M.D., Professor of Clinical Medicine, Albert Einstein College of Medicine, Yeshiva University; Attending Physician, Pulmonary Division, Montefiore Hospital, New York; and Morris Rubin, M.D., Associate Clinical Professor, Thoracic Surgery, Albert Einstein College of Medicine, Yeshiva University; Director, Cardiac and Thoracic Surgery, Morrisania City Hospital. In Association with George C. Leiner, M.D., Lecturer in Medicine, Columbia University College of Physicians and Surgeons; Attending Physician, Pulmonary Division, Montefiore Hospital, New York; and Doris J. W. Escher, M.D., Lecturer in Medicine, Columbia University, College of Physicians and Surgeons; Associate Attending Physician, Medical Division, Associate Physician, Division of Diagnostic Roentgenology, and Physician-in-Charge, Cardiac Catheterization Unit, Montefiore Hospital, New York. W. B. Saunders Company of Philadelphia, 1961. Price: $25.00.

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What Teenagers Want to Know, by Florence Levinsohn, B.A., M.A., in consultation with G. Lambard Kelly, M.D. Budlong Press Co., Chicago, Illinois, 1961. Price $1.50.

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Mayo Clinic Diet Manual, Third Edition, by The Committee on Dietetics of the Mayo Clinic. W. B. Saunders Company, 1961.

---

Medical Pharmacology, Principles and Concepts, by Andres Goth, M.D., Professor of Pharmacology and Chairman of the Department, The University of Texas Southwestern Medical School, Dallas, Texas. The C. V. Mosby Company, St. Louis, 1961. Price: $11.00.

---

Relief of Symptoms, by Walter Modell, M.D., Director of Clinical Pharmacology and Associate Professor of Pharmacology, Cornell University Medical College, New York, N. Y.; Attending Physician, New York Veterans Administration Hospital, New York, N. Y.; Associate Visiting Physician, Bellevue Hospital, New York, N. Y.; Member, General Committee on Revision, United States Pharmacopeia XVII. The C. V. Mosby Company, St. Louis, 1961. Price: $11.50.

---

Heredity in Ophthalmology, by Jules Francois, Professor of Ophthalmology at the University of Ghent, Belgium, Member of the Academy of Medicine. The C. V. Mosby Company, St. Louis, 1961. Price: $23.00.

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Progress in the Treatment of Fractures and Dislocations—1950-1960, by Thomas B. Quigley, M.D., Assistant Clinical Professor of Surgery, Harvard Medical School, Surgeon, Peter Brigham Hospital; and Henry Banks, M.D., Clinical Associate in Orthopedic Surgery, Harvard Medical School, Associate in Orthopedic Surgery, Peter Bent Brigham Hospital. W. B. Saunders Company, Philadelphia and London, 1960. Price: $2.50.

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Essential Hypertension, An International Symposium, sponsored by Ciba, edited by

K. D. Bock and P. T. Cottier. Springer-Verlag, Berlin, Gottingen and Heidelberg, 1960.

CIBA Foundation Study Group No. 9—Progesterone and the Defence Mechanism of Pregnancy, in honour of Dr. G. W. Corner, by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Margaret P. Cameron, M.A. With 22 illustrations. The Little, Brown and Company, Boston.

CIBA Foundation Study Group No. 10—Biological Activity of the Leucocyte, in honor of Professor A. Vannotti, by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P.; and Maeve O'Connor, B.A. With 17 illustrations. The Little, Brown and Company, Boston.

Clinical Obstetrics, by Benjamin Tenney, M.D., Clinical Professor of Obstetrics and Gynecology, Harvard Medical School; Director of the Department of Obstetrics and Gynecology, The Boston City Hospital; and Brian Little, M.D., Associate in Obstetrics and Gynecology, Harvard Medical School; Associate Director of the Department of Obstetrics and Gynecology, The Boston City Hospital; Obstetrician and Gynecologist, Boston Lying-in Hospital. The W. B. Saunders Company, Philadelphia. 1961. Price $8.50.

The Art of Thinking, by Dagobert D. Runes. Philosophical Library, New York, 1961. Price: $2.75.

The Doctor Business, by Richard Carter. The Doubleday & Company, Inc., Garden City, New York. Price: $.95.

Ciba Foundation Symposium on Somatic Stability in the Newly Born, by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. Little, Brown and Company, Boston, 1961. Price: $10.00.

Mechanisms of Disease, An Introduction to Pathology, by Ruy Perez Tamayo, M.D., Professor and Director of the Department of Pathology of the School of Medicine, National University of Mexico. W. B. Saunders Company, Philadelphia, 1961. Price: $14.00.

Introduction to Anesthesia, The Principles of Safe Practice, by Robert D. Dripps, M.D., Professor and Chairman, Department of Anesthesiology, School of Medicine, University of Pennsylvania; Anesthetist, Hospital of the University of Pennsylvania, Philadelphia; and James E. Eckenhoff, M.D., Professor of Anesthesiology, School of Medicine, University of Pennsylvania; Anesthetist, Hospital of the University of Pennsylvania, Philadelphia; and Leroy D. Vandam, M.D., Clinical Professor of Anaesthesia, Harvard Medical School, Director of Anesthesia, Peter Bent Brigham Hospital, Boston, Massachusetts. Line drawings by Leroy D. Vandam, M.D., Second Edition. W. B. Saunders Company, Philadelphia, 1961. Price: $8.00.

Differentiation Between Normal and Abnormal in Electrocardiography, by Ernst Simonson, M.D., Professor of Physiological Hygiene, University of Minnesota, Minneapolis, Consultant in Electrocardiography at Mt. Sinai Hospital and Veterans Administration Hospital, Minneapolis. The C. V. Mosby Company, St. Louis, 1961. Price: $13.50.

Ciba Foundation Symposium on Quinones in Electron Transport, edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston, 1961. Price: $11.00.

Memoirs of a Medico, by Dr. E. Martinez Alonso. Doubleday & Company, Inc., Garden City, New York, 1961. Price: $4.50.

Pathologic Physiology, Mechanisms of Disease, edited by William A. Sodeman, M.D., Sc.D., Dean and Professor of Medicine, Jefferson Medical College. Third Edition. W. B. Saunders Company, Philadelphia and London, 1961. Price: $15.00.

Ciba Foundation Study Group No. 7, Virus Meningo-Encephalitis, edited by G. E. W.

Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Margaret P. Cameron, M.A. Little, Brown and Company, Boston, 1961.

Hospitals, Doctors, and Dollars, by Robert M. Cunningham, Jr., Editor, The Modern Hospital. F. W. Dodge Corporation, New York, 1961. Price: $6.95.

Clinical Obstetrics and Gynecology, Volume 4, Number 2, edited by Robert E. L. Nesbitt, Jr., M.D.; A. N. Arneson, M.D., and James F. Nolan, M.D. Paul B. Hoeber, Inc., New York, 1961. Price: $18.00 (4 volumes).

A Traveler's Guide to Good Health, The Do's and Don'ts of Staying Healthy While Seeing the World, by Colter Rule, M.D., Doubleday & Company, Inc., Garden City, New York, 1960. Price: 95 cents.

The Cardiac Arrhythmias, by Brendan Phibbs, M.D., Casper Clinic, Casper, Wyoming. The C. V. Mosby Company, St. Louis, 1961. Price: $7.50.

Health Education, A Guide for Teachers and a Text for Teacher Education, project of Joint Committe on Health Problems in Education of the National Education Association and the American Medical Association with the cooperation of contributors and consultants, edited by Bernice R. Moss, Ed.D., Professor of Health Education, University of Utah; Warren H. Southworth, D.P.H., Professor of Health Education, University of Wisconsin; and John Lester Reichart, M.D., Chicago, Illinois. National Education Association of the United States, 1961. Price: $5.00.

Ciba Foundation Symposium on the Nature of Sleep, by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. Little, Brown and Company, Boston, 1961. Price: $10.00.

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## Curiosa et Trivia

WILLIAM B. McCUNNIFF

Doctors seem to be the "marrying kind." Recent U. S. Bureau of the Census showed that 85.5 per cent of physicians are married, while 69.9 per cent of the laboring force in this country are married.

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Even though the largest American family is the Smiths, there is only one Smith Memorial Hospital in the country, at Decorah, Iowa.

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It is estimated that more than 80 per cent of civil cases tried today by trial lawyers involve important medical issues.

## Capsule Clinics

- The reported strong association between goiter and atherosclerosis was not evident in 453 autopsies. Welsh, R. A., *et al.*, Circulation 24:777, 1961.
- Increasing salt loads not only attenuates but eventually reverses the diuretic effect of hydrochlorothiazide. Armstrong, M. L., Circulation 24:879, 1961.
- Patients with antecedent angina pectoris who sustain an initial acute myocardial infarction have poorer immediate and long term survival rates and experience greater disability than do patients without such a history. Francis, R., *et al.*, Circulation 24:935, 1961.
- Triparanol (MER/29) therapy is not associated with improvement in exercise—electrocardiographic tests despite significant hypocholesterolemic effects maintained for 12 months or longer. Russek, H. I., Circulation 24:1028, 1961.
- Various broad spectrum antibiotics were employed systematically in treatment of 74 patients with severe pustulocystic acne. Seventeen similarly affected patients served as controls. Fifty-four (74.3 per cent) of the antibiotic group showed significant improvement as compared to the control group. There were no differences in the effectiveness of the several antibiotics tested. All were effective. Wansker, B. A., Arch. Dermatol. 84:146, 1961.

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From Clinical Clippings, the Francis Roberts Agency, Inc.

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# WASHINGTON

## A Tax That Goes Up Up Up

The Missouri Public Expenditure Survey recently made available the following review and information on social security.

On January 1, 1962, the federal social security tax will go up for the eighth time in the last 12 years. The tax rate increase enacted by the last Congress will amount to one-eighth of one per cent on employees and a like amount for employers. The tax increase will amount to two-tenths per cent for the self-employed. The tax rates are applied to the first $4,800 of earnings.

The new law also schedules three additional rate increases to occur by 1968. At that time the maximum rate will be 4⅝ per cent, to be paid by employees, with an equal amount to be paid by employers. The combined rate will be 9¼ per cent. The rate for self-employed will be 6.9 per cent after January 1, 1968 according to the 1961 schedule.

The rate increase on January 1 and the rate increases scheduled through 1968 are not the last word, however. There are other proposals to increase the social security tax still further. One of the most publicized of such proposals is H.R. 4222, the administration-sponsored "Health Insurance Benefits Act of 1961." Hearings were held on it by the U. S. House Ways and Means Committee last summer. It will be awaiting action when Congress reconvenes in January. A companion measure, S. 909, is pending in the Senate.

This proposal would increase the tax by one-fourth of one per cent each on employees and employers and would increase the wages covered by the tax rate from $4,800 to $5,000 to finance a program of hospital and nursing services for aged recipients of social security. After this bill was introduced, the Secretary of Health, Education and Welfare recommended to the committee hearing testimony on the bill that the maximum earnings to be taxed be raised to $5,200 instead of $5,000 as provided in the bill.

This would undoubtedly be but the first of many upward revisions in the social security tax to finance medical care if this program is enacted.

The history of the social security program is one of constant liberalizations and ever-increasing taxes. The table below shows what has happened to this program since it started and what is presently scheduled to happen through 1968.

With Congress convening in early January, now is an appropriate time to bring to the attention of your associates, friends and employees the scheduled increases in social security taxes that lie ahead and the prospective additional increases in social security taxes involved in the proposal to finance a federal medical care program from social security taxes. It is also a timely moment to express your views to your Senators and your Representative.

### PAST AND SCHEDULED SOCIAL SECURITY TAXES

| Period | Rate[*] (%) | Covered Wages | Maximum Tax Paid<br>EMPLOYEE[*] | <br>EMPLOYER | <br>TOTAL |
|---|---|---|---|---|---|
| 1937-49 | 1 | $3,000 | $ 30.00 | $ 30.00 | $ 60.00 |
| 1950 | 1½ | 3,000 | 45.00 | 45.00 | 90.00 |
| 1951-53 | 1½ | 3,600 | 54.00 | 54.00 | 108.00 |
| 1954 | 2 | 3,600 | 72.00 | 72.00 | 144.00 |
| 1955-56 | 2 | 4,200 | 84.00 | 84.00 | 168.00 |
| 1957-58 | 2¼ | 4,200 | 94.50 | 94.50 | 189.00 |
| 1959 | 2½ | 4,800 | 120.00 | 120.00 | 240.00 |
| 1960-61 | 3 | 4,800 | 144.00 | 144.00 | 288.00 |
| 1962 | 3⅛ | 4,800 | 150.00 | 150.00 | 300.00 |
| *Scheduled* | | | | | |
| 1963-65 | 3⅝ | 4,800 | 174.00 | 174.00 | 348.00 |
| 1966-67 | 4⅛ | 4,800 | 198.00 | 198.00 | 396.00 |
| 1968 | 4⅝ | 4,800 | 222.00 | 222.00 | 444.00 |

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[*] Paid by both employees and employers. Self-employed pay about one and a half times the tax paid by workers.

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*hand in*
*"doing"—*

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1. Barden, F. W., et al.: J. Maine M. A. 46:99, 1955.
2. Ford, R. A., and Blanchard, K.: Journal-Lancet 78:185, 1958.

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Across
Missouri

### Flays Health Plan for Aged

*The Lebanon Journal* of Dec. 7, 1961, under the heading "Dr. Summers Flays Health Plan for Aged" carried the following article, as "Special to the *Journal*":

"Adoption of the Anderson-King proposal calling for the addition of a medical care plan to the federal Social Security program would be a 'terrible mistake for our country,' Dr. J. H. Summers of Lebanon told the United States Senate Special Committee on Aging at a hearing here (Kansas City) yesterday.

"Dr. Summers, as president of the Missouri State Medical Association, delivered his remarks at the first of six hearings being conducted this week and next by Senator Edward V. Long, Missouri's junior senator.

"After first discussing the protection afforded by voluntary health insurance programs and the available local and state resources for meeting the health needs of aging citizens, Dr. Summers assailed the Anderson-King bill, saying:

" 'I have a feeling that a large number of people who have discussed this proposal have not thoroughly studied the bill's provisions or objectively weighed its effects.'

"Since about 80 per cent of Missourians over 65 are receiving Social Security benefits, he pointed out, there are 20 per cent of our senior citizens who would be ineligible for health benefits under Social Security.

"And those who would be eligible, he continued, would have to pay amounts ranging from $20 to $90 for each period of confinement or other type of health service.

" 'The specific provisions of the proposal are, however, not as important as an assessment of its over-all effects,' the medical association head said. 'It is a proposal that would, for example, violate for the first time the principle of providing Social Security benefits in cash, as opposed to furnishing goods and services.

" 'I wonder what our over-65 citizens would say to a proposal that would reduce their present cash benefits and furnish instead actual food and clothing? Yet, this is exactly what the Anderson-King bill proposes with respect to health care.'

"Dr. Summers, who said he was speaking on behalf of more than 3,800 doctors who are members of the state association, termed the bill one 'that would inevitably mean government interference—and ultimately government control—in the relationships between a patient and those who provide his health services.'

" 'It would be inordinately expensive and lead to unnecessary over-use of our medical facilities,' the Lebanon physician said. 'It would be compulsory for everyone, whether or not they needed or wanted to participate in the program.'

"The physician said that 'many of the bill's supporters' have openly admitted that it would 'inevitably mark the first step toward socialization of our private health care system, not only for our aged, but for every citizen,' and would place a heavy—and unnecessary—financial burden on taxpayers for establishing a system to pay for health care for many who do not actually need help in providing for themselves.

" 'We are already equipped to handle—through private voluntary means, coupled with the Kerr-Mills Law and our own local and state resources—all the things that the Anderson-King proposal professes to do for our aged people,' Dr. Summers declared.

" 'Our own self-reliant efforts should be encouraged by the federal government and given a full opportunity to eradicate what problems remain,' Dr. Summers said. 'There is no necessity for imposition of a compulsory, tremendously expensive, unnecessary federal program that takes away the right of every citizen to act for himself, in the personal provision of his own health care.' "

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There are tiny, easy-to-swallow Filmtab® tablets—125 mg. and 250 mg. (200,000 units and 400,000 units), a tasty, cherry-flavored suspension (each 5-ml. teaspoonful contains 125 mg.) and two combinations (Filmtab and suspension) with the triple sulfas. Depending on severity of infection, dosage for Compocillin-VK is usually 125 mg. or 250 mg. three times a day. Won't you try Compocillin-VK?

1. R. Lamb and E. S. Maclean, Penicillin V—A Clinical Assessment After One Year, *Brit. M. J.*, July 27, 1957, p. 191-193. 2. J. I. Burn, M. P. Curwen, R. G. Huntsman and R. A. Shooter, A Trial of Penicillin V, *Brit. M. J.*, July 27, 1957, p. 193. 3. J. Macleod, Current Therapeutics, *The Practitioner*, 178:486, April, 1957. 4. W. J. Martin, D. R. Nichols and F. R. Heilman, Observations on Clinical Use of Phenoxymethyl Penicillin (Penicillin V), *J.A.M.A.*, p. 928, March 17, 1956.

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C. G. STAUFFACHER, M.D., Secretary

# Missouri Academy of General Practice

### St. Louis Academy Installs President

On Saturday evening, December 2, at the Missouri Athletic Club in downtown St. Louis, the Annual Installation Dinner Dance of the St. Louis Academy of General Practice took place in grand style. Some 275 people including members, their wives and guests were present to enjoy a delightful evening. The occasion was presided over by Dr. V. E. Michael, retiring president. During the evening ceremonies he turned over the gavel to the incoming president, Dr. Wilbur A. Mullarky. Watching this procedure with considerable interest was Dr. Lois C. Wyatt, president-elect of the St. Louis Academy who will be involved in a similar procedure at the Installation Dinner in 1962. After receiving the gavel, Dr. Mullarky presented an honorary plaque to Dr. Michael in recognition of his services as the 15th president of the St. Louis Academy.

Officers were seated at the head table.

Dr. Mullarky receives gavel from Dr. Michael.

Following termination of the official part of the program those present were treated to another outstanding performance by the Greene County Medical Society Troubadours with their "Medical Hit Parade." The splendid reception by the audience of this outstanding show, we hope, was fully noticed by the Troubadours.

The Greene County Troubadours entertained.

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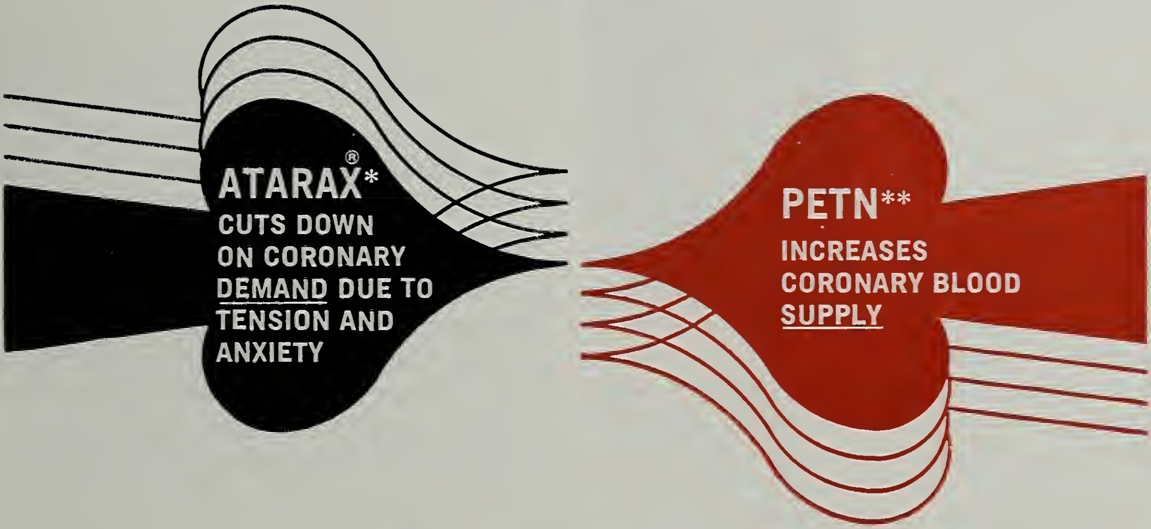
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1. Clark, T. E., and Jochem, G. G.: Angiology **11**:361 (Aug.) 1960.

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# Woman's Auxiliary

## Medicine Is Not a Substitute for Food

Some of our Senior Citizens are weary of the Ribicoff-A.M.A. debate on what is socialism. They do not feel that their problems are going to be solved by semantics, and they are interested in relief, and not philosophy. I attended the recent public hearing of the Senate Special Committee on Aging conducted by Senator Edward V. Long. A kindly-appearing white haired grandmother asked me why I was present. I answered that I was the wife of a physician, and before I could say another word, she abruptly cut me off with this comment, "I'd be ashamed to admit it."

Mrs. Frederick E. Wade

I do not think her attitude and criticism were the expression of the "lunatic fringe" because her sincerity was as evident, as was the fact she had serious problems. I am not resentful of her attitude, because in fear and desperation, all of us may seek palliatives. Later, I was greatly disturbed when I heard her testify, and urge passage of the social security approach to medical care, so she could afford to pay for the medicine she needed to survive.

Many of the Senior Citizens are confused about the exact provisions of the King-Anderson Bill, and it is a cruel deception that some of them believe it calls for an over-all increase in their social security payments, that will enable them to meet their financial obligations, and truly live in dignity. Some of them have already lost faith in the integrity of American Medicine, and we pray that this will be restored and that the loss of understanding will not lead to loss of faith in our form of government, next.

The broad statement of our President, that the senior citizens of this country should not have to suffer the "indignity of a means test" to determine if they need medical care assistance, and the statement of Secretary Ribicoff that "The opposition of 180,000 doctors could not frustrate the will of 180 million Americans"—is perhaps the basis for their belief that the federal government will meet their needs through the social security approach to medical care.

I am an American, with a very selfish interest, in the future welfare of our Nation, as well as a sincere desire and realization that if we are to have a future we must first make today secure.

The financial problems of our Senior Citizens are no different than those of all other Americans, except their wage-earning years have drawn to a close. In the richest Nation in the World, even by stringent thrift, they have not been able to save enough for their Golden Years. Why?

Is the medical profession responsible, as some may believe? Yes, indeed, this is true in part. Advancement of medical science has led to an increase in the average life span of 40 years in 1900, to 68 years plus today. It is unfortunate that advancement of medical science has outdistanced advancement in economic science. In an attempt to bridge this gap, the social scientists are seeking to harness medical science with progress in economics. In the meantime medicine continues to advance and even predicts a life span of 100 years or 120 years in the not too distant future.

No one questions the wisdom of the physician who tries to find a cause before prescribing a treatment. Perhaps physicians are more aware than social planners of the dangers inherent in palliative remedies. The pain of an acute appendicitis attack may be relieved by codeine, but unless the cause is corrected the patient has only been accorded the benefit of dying "comfortably."

If our social planners attacked causes, before prescribing a cure, what would they find in Missouri? The life savings, which might have been completely adequate in 1940, have been robbed of 50 per cent of their value by inflation. Many of our Senior Citizens have led frugal lives in order to be self-supporting in their old age, and the cruelty of inflations has denied them this dignity.

Missouri may boast of either a very healthy climate, or fine medical care, as one out of every eight Missourians is over age 65, totalling in the 1960 census 503,400 persons. Iowa is the only

*(Continued on page 178)*

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# Microsporum Canis

## *Pets and Human Ringworm*

**_Microsporum canis_ is the most common cause of ringworm in humans transmitted by animals. Stray or household pets are usually the conveyors of the disease. Diagnosis can be made by Wood's lamp and growth on mold culture media. Griseofulvin has been found effective in treatment. A case report illustrating transmission, diagnosis and treatment, is presented.**

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*Microsporum canis,* also known as *M. felinum* and *M. lanosum,* is the commonest cause of human ringworm transmitted by animals. Infected household pets, especially infected stray kittens and puppies with their appealing, affectionate, natures are frequently guilty of transmitting ringworm to children and to the unwary adult (fig. 1). Infection rates in pets are highest in areas where pets are exposed to infected farm and wild animals. In one survey, excluding tinea pedis, *M. canis* has been isolated in as high as 85 per cent of human ringworm cases. Human ringworm caused by other dermatophytic, zoophilic fungi, *M. distortum, Trichophyton verrocosum, T. mentagrophytes* var. *granular, T. equinum* and *T. gallinae,* are also recognized but are less frequent. Ringworm due to *M. canis* is highly contagious and is often carried by a healthy appearing pet. Human ringworm lesions most often occur on the exposed portions of the patient's body, usually appearing within two weeks of exposure. Single ringworm lesions are common; however, multiple lesions appearing at intervals following exposure are not unusual. A highly contagious case of human ringworm caused by *M. canis* transmitted by a healthy appearing stray kitten to four individuals during a

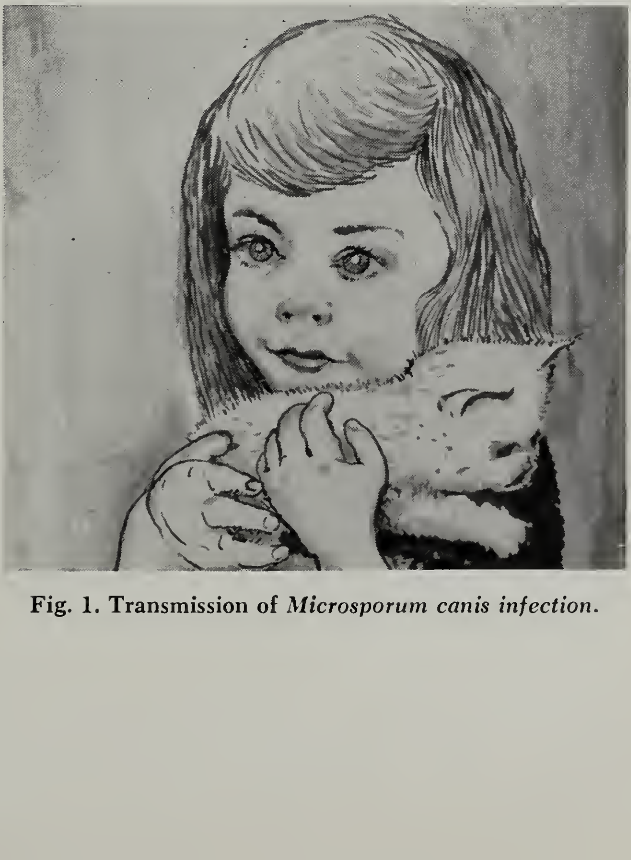

**Fig. 1. Transmission of *Microsporum canis infection.***

24 hour exposure period is reported. In eight to 12 days after exposure these four patients developed 16 separate ringworm lesions.

In the past, human ringworm treatment has been limited to the use of the ointments containing salicylic acid, undecylenic acid, sodium proprionate, ammoniated mercury, pragmatar and to tincture of iodine.

Topical treatment with ointments and iodine though often successful have at best been prolonged, troublesome and messy. Roentgen treatment has been reserved for cases resistant to other treatment measures. Recently an oral antifungal agent, griseofulvin,* has become available.

This medication is effective in most human ringworm infections but must be taken until the ringworm lesion is completely cleared. Since griseofulvin is expensive, an accurate diagnosis should be established; however, treatment should not be delayed for a culture diagnosis. Whenever the clinical diagnosis is doubtful, simple laboratory procedures will establish the presence of fungus in the ringworm lesion. These procedures are inexpensive and easily performed.

## Supplies Needed

Supplies needed for satisfactory mycological examination are inexpensive and readily available. A dropper bottle containing 10 per cent potassium or sodium hydroxide is needed for initial microscopic examination of skin scrapings or fungus infected hair. Fungus culture media should include blood agar and a selective medium for pathogenic fungi, such as Sabourauds dextrose agar containing cycloheximide 0.5 mg. per ml. and chloramphenicol, 0.05 mg. per ml.† An incubator is not necessary since mold cultures will grow well at room temperature.

Lactophenol cotton blue is the only reagent necessary for microscopic examination of fungus cultures. The formula for lactophenol cotton blue is as follows: phenol crystals 20 gm., lactic acid (syrup) 20 ml., glycerol 40 ml., and water 20 ml. These ingredients are dissolved with gentle heating and 0.05 gm. of cotton blue stain are added.

## Technics Used in Ringworm Diagnosis

The first technic used in ringworm diagnosis is examination for fluorescence in the lesion, in skin scrapings or infected hair under the Wood's lamp. This examination should be carried out in a dark room, keeping in mind that nonspecific fluorescence can result from ointments and other substances. *M. canis* is the only commonly observed zoophilic dermatophyte that will fluoresce. Scrapings from the lesion or infected hairs placed on a sheet of white paper will fluoresce with a bright yellow-green color. Since *M. canis* is the most common cause of ringworm in dogs and cats, the Wood's lamp examination is a valuable diagnostic aid in animal contact cases. *M. gypsum* a less common cause of ringworm and the *Trichophyton* do not fluoresce. *M. audouini,* the cause of epidemic ringworm of the scalp in children, also fluoresces but is not transmitted by animals.

The second diagnostic technic is the microscopic examination of hair or skin scrapings in the 10 per cent potassium or sodium hydroxide. Skin scales or scrapings from the periphery of the ringworm lesion or infected hairs are placed in a drop of this reagent on a microscopic slide, covered with a cover slip and allowed to sit at room temperature for about 30 minutes to clear. Examination of the cleared positive sample under the microscope will reveal branched hyphae, conidia and spores (fig. 2).

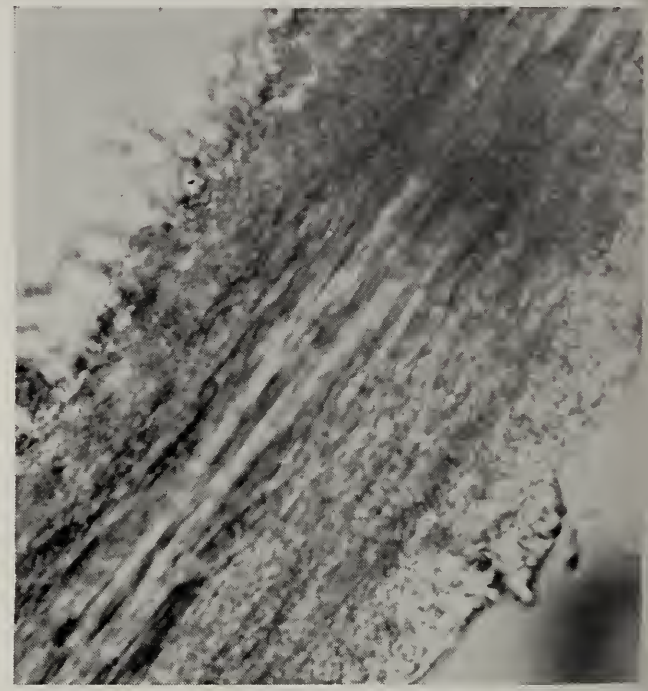

**Fig. 2. Cat's hair heavily infected with *Microsporum canis* in 10 per cent sodium hydroxide. (X 430.)**

The third diagnostic technic is the culture of fungi from skin scrapings, scales or abnormal hair shafts on the surface of a selective mold medium at room temperature. If present, fungi will grow producing characteristic colonies in

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* Griseofulvin supplied as Fulvicin by the Schering Corporation.

† Selective media available as mycosel or mycobiotic agar.

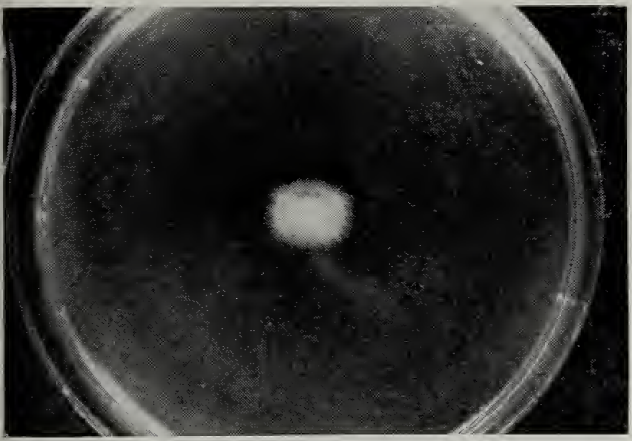

Fig. 3. One week old colony of *Microsporum canis.*

from five days to three weeks (fig. 3). Cultures should not be discarded before one month. *M. canis* usually grows within the five days while the *Trichophyton* usually require longer growth periods. Since antibiotics are present in selective mold media there is little problem with bacterial contamination. Saprophytic molds grow poorly on selective mold medium, therefore, any growth is usually significant. After growth occurs, a few days should pass to allow for the development of spores. A small portion of the growth is placed in a drop of lactophenol cotton blue on a microscopic slide under a cover slip. After a few minutes the preparation is examined under a microscope. *Microsporum* are identified by a mycelium with large football shaped septate spores (macroconidia). The *Trichophyton* have small round spores that are easily overlooked.

## THE LESION OF RINGWORM

While examining a ringworm lesion, it is well to remember that the ringworm fungi are keratinophylic and slow growing; hence, the skin lesion is superficial and slow to develop. The typical ringworm lesion is a round or irregularly circumscribed area. The skin will be partially denuded on haired portions of the body. Close examination may reveal stubs of broken hair. The lesion almost always shows desquamation of superficial keratin scales which sometimes accumulate producing epithelial debris. Inflammation is always present, sometimes accompanied by purulent exudate. Active mold growth is confined to the periphery of the ringworm lesion. Material for examination and culture should be obtained from these peripheral areas.

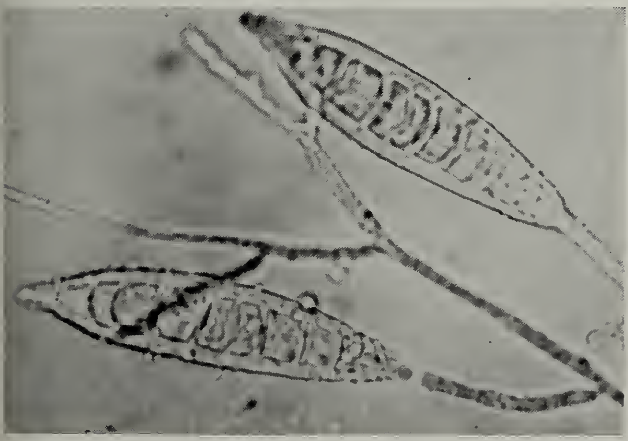

Fig. 4. Mycelium with macroconidia of *Microsporum canis.* (X 430).

## CASE REPORT OF CAT RINGWORM TRANSMITTED TO A HUMAN

A young woman was seen eight days after playing with a healthy appearing stray kitten. The kitten had no skin lesions or hair shedding. The patient was wearing shorts and a short sleeved blouse. The patient's husband also played with the kitten. The next day a small girl played with the kitten rubbing the fur against her cheek. On the following day a fourth person played with the kitten.

After eight days the first young woman, the case described, first noticed a ringworm lesion on the anterior aspect of one thigh. Her husband developed ringworm on his neck. On the following day the small girl developed ringworm on her face. The fourth victim developed a ringworm on his arm.

The lesions of the patient described began as a small papule on the anterior thigh. Within 48 hours the papule enlarged to a circumscribed area of inflammation and when about 5 millimeters in diameter the papule changed to a ring shaped lesion with a clear slightly scaling center and a slightly inflamed, raised, peripheral edge. Intense pruritis occurred.

Ringworm due to *M. canis* was suspected from the exposure history and characteristic appearance of the skin lesion. The diagnosis was confirmed by fluorescence of the lesion under the Wood's lamp and a microscopic slide preparation of scrapings in 10 per cent sodium hydroxide which revealed microsporum mycelia. Culture on antibiotic containing sabourauds media yielded *M. canis*.

Treatment with a salicylic and undecylinic acid ointment resulted in partial clearing of the initial lesion; however, new lesions appeared. Topical treatment was discontinued and oral treatment with griseofulvin was begun. The patient took 250 mgs. of griseofulvin four times daily for nine days, starting four days after the appearance of the first ringworm lesion. Figure 5 shows the lesions at the start of griseofulvin treatment. Figure 6 shows the same lesions after three days of griseofulvin treatment. Figure 7 shows the same lesions after six days of

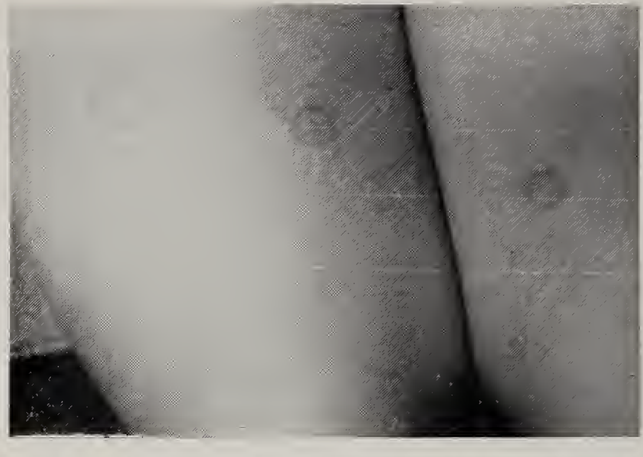

**Fig. 5. Human ringworm due to *Microsporum canis* of four days' duration, before griseofulvin treatment.**

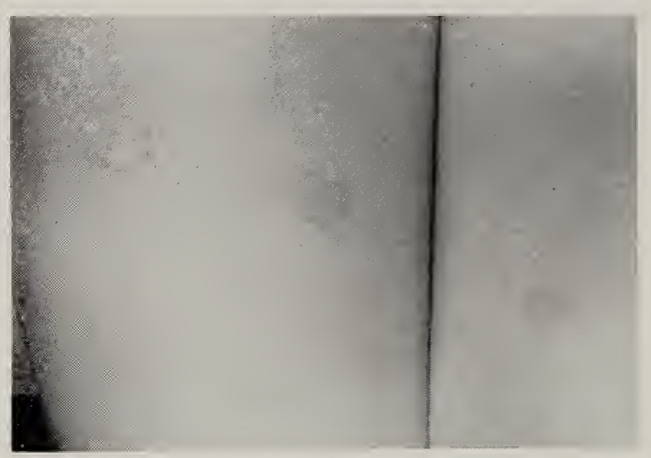

**Fig. 6. Human ringworm due to *Microsporum canis*, seven days' duration, after three days of griseofulvin treatment.**

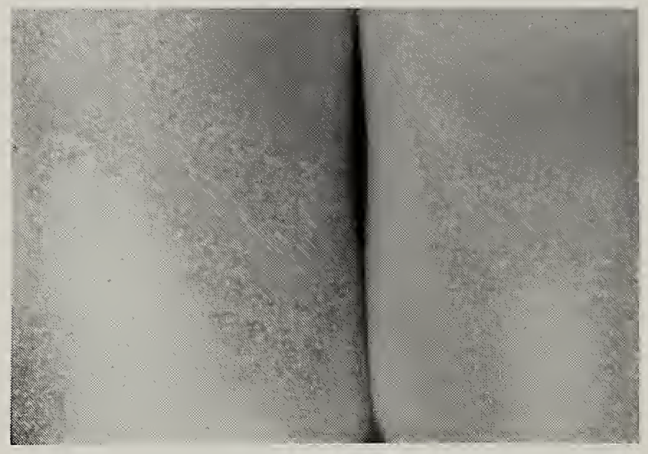

**Fig. 7. Human ringworm due to *Microsporum canis*, ten days' duration, after six days of griseofulvin treatment.**

**Fig. 8. Human ringworm due to *Microsporum canis*, 12 days' duration, after eight days of griseofulvin treatment.**

griseofulvin treatment. Figure 8 shows one lesion after eight days of griseofulvin treatment. At this time the lesions were virtually cleared but still showed slight signs of activity.

## SUMMARY

This case report illustrates the highly contagious nature of cat ringworm. Exposure of four individuals to one stray kitten resulted in 16 separate ring worm lesions. It is a common observation that the exposed body areas are usually infected with ringworm. The infected cat usually shows small skin lesions or broken hairs which will fluoresce under the Wood's lamp; however, this report illustrates that the infecting fungus can be transmitted by a healthy appearing animal.

Stray pets are the most likely source of *Microsporum canis* infection. When in doubt about *M. canis* infections in a cat or dog, examination of the animal under the Wood's lamp and cultural studies can establish the source of the infecting organism. Clinical observation while reliable is not adequate in all cases, so that laboratory studies may become essential for a definite diagnosis. *M. canis* fluoresces on the infected animal and in human ringworm lesions. *M. canis* is easily cultured, grows rapidly on selective mold medium and is easily identified under the microscope. Griseofulvin is effective in treatment of human ringworm due to *M. canis* and is especially valuable in the treatment of multiple ringworm lesions.

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JEROME T. Y. SHEN, M.D., *St. Louis*

# Medical Care of the Adolescent

**Handling the adolescent patient is discussed and two case histories are presented in illustration.**

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**The paper was presented at the fourth annual meeting of the Missouri Chapter of the American Academy of Pediatrics, Columbia, May 10, 1961.**

During the last decade "adolescent medicine" has been growing rapidly. Clinical studies and basic researches have been undertaken at different medical centers and more and more physicians include the teenagers in their practice. Since the practical management of the adolescents is somewhat different from that of children or adults and since there is little reference in the literature about the experience of combined private practice of adolescent medicine and pediatrics it is the purpose of this paper to describe the physical set up and routine management of the author's adolescent practice and discuss a few case histories to illustrate certain aspects of adolescent medicine.

It is ideal to have a physical setting like the Boston Adolescent Unit but, as Dr. Gallagher[1] himself stated, the most important thing is the doctor's attitude toward the adolescents. The rest is helpful but not essential. I use the same office for pediatric and adolescent patients. I try to see most adolescents after their school hours and on Saturdays. However, some of them do stay in the same waiting room with babies, smaller children and mothers. I often ask these adolescent patients whether they mind being with young children and the usual answer is "no." Of course, I do use an appointment system for all patients. When a mother calls for an appointment the secretary will ask what is the chief complaint and are there any other problems. Many times the so-called "chief complaint" is actually of minor nature and one of the so-called other problems is the real reason why the mother asks for help. For new patients an appointment of 45 minutes will be given to the parent and another to the patient, one or two days later. This will lessen the patient's anxiety of waiting. In case of school check-up and acute illness both parent and patient will be seen together, and separate interviews may be suggested at that visit, or later if indicated. During the examination the parents always stay in the waiting room. For patients previously under my care, appointments will be given to the patients only. For behavior problems, learning difficulties and psychosomatic complaints, separate appointments are given. Parents are advised to tell their children the real reason for seeing the doctor. It is most important to start the parent-doctor-adolescent relationship on an honest basis. If the parents indicate the desire of talking to me before making an appointment this wish is always honored.

The waiting room is arranged for both pediatric and adolescent patients. There are little chairs and a table for children and large ones for teenagers and parents. Children's books and grown-up and adolescent magazines are provided.

For interviewing the parents I use the consultation room. This room is so arranged that I can interview the parents in a relaxed but professional atmosphere. I use the similar form of records as that of the Adolescent Unit[2] of Harvard Medical School with some modifications. To start the interview I usually say this, "Mrs. Jones, tell me what concerns you about your daughter. Next time I will talk to her alone just as I am talking to you now. I think both of you will speak more freely if you are not together. There will be a nurse in the room when I examine your daughter so she will feel more at ease. Adolescents like to be treated like grown-ups so I shall tell your daughter that she will be treated confidentially just as an adult patient. Anything important to you I will inform you with her knowledge. The essential thing is for me to help you and your daughter to solve some problem, physical or otherwise. So today's time is all yours." No parents have objected to that approach and after one gives them the chance to spell out their problems the cooperation in this regard is virtually assured. The most important thing in interviewing either the patient or the parent is to listen and to understand. I usually write down notes mostly verbatum quotations. Sometimes I ask questions to clear up or further explore certain points. Many times I put down notes after the interview.

One examining room in my office has a large examining table. I like to use this room for both interviewing and examining the patients because teenagers feel more at ease in a physical medical setting. The decorations are purposely arranged. The certificates on the walls define my qualifications. The flowers, fish bowl, airplane, convertible and other articles are to help or ease the conversation for non-communicative patients, or when the patients find it too difficult to discuss some problem at certain times. To start I usually make it clear to the patients that I have told their parents and they agree that they will be treated confidentially just as adults. Complete physical examinations including blood pressures and fundoscopies are done at the first visit. Rectal examinations are omitted only if the patients object. I rarely do vaginal examinations. Urine, blood, vision and hearing tests are routine but are usually done on later visits. I do achievement tests only when indicated. I use the Modified Massachusetts Vision Test[3] and the pseudoisochromatic plates for color vision.[4] A Beltone Audiometer is employed for testing hearing. For achievement tests I use Metropolitan arithmetic, Gray's Oral Reading Paragraphs, and Morrisson-McCall's Spelling Scale. I usually ask the patients to draw a person to get some idea of their intelligence and coordination. When I refer a patient to a psychologist I prefer that he use WISC for those below 16 and Weschler-Bellevue for older ones. Among the projection tests Rorschach and TAT (Thematic Apperception Test) are most useful.

Following are two case histories.

## Case Reports

Sue, now 19, was brought to my office by her mother in 1958 because of amenorrhea for four months. She was then 16 years old, a junior in high school. She was healthy, attractive and friendly. Her birth weight was 5 pounds, 5 ounces, and she had pyloric spasms and vomiting until 4 months of age. She needed sedatives during her first year of life. She was easily upset and had possible poliomyelitis a few years ago. Her school achievement has been good and she gets along well with people. Her father, 44, is an accountant and her mother, 43, is a school teacher. One sister 13 years old has been under my care for menorrhagia. Her mother has not had menstrual trouble. Sue started menstruation at 13, irregular and without pain for her first one and one half years. From January to June 1958 the periods became regular coming on the fourth and fifth day of the month and lasting four or five days. Some discomfort and mild pain were experienced. There was no period in July, August, September and October. Examination including a rectal was negative except for mild acne. Pubic hair and breasts were all at stage 5. It is important to record the stages of their sexual development so that some comparison can be made later. Detailed classifications can be found in Tanner's book.[5] Sue stated that she had a hard sophomore year and expected another difficult year ahead. Sue was reassured that most probably the amenorrhea was functional and temporary and that I could make her bleed if no period occurred next month. Meantime an x-ray for bone age was ordered. My impression was either hypothalamic amenorrhea due to emotional stress or amenorrhea due to relative ovarian insufficiency. I hoped that by her verbalization of her worries and my reassurance her periods might come back. Sue came back to me on November 24 still without bleeding. Bone age was 18 years. Both the patient and her mother were more worried this time. Physical examinaton showed the same. There was no history or evidence of pregnancy. Progesterone 50 mg. in oil was given intramuscularly and both of them were told that Sue would bleed in three to seven days. Otherwise more complete work up should be done. On December 5, 10 days after the injection her mother called that Sue did start to menstruate that day. This time it lasted, as usual, five days with the usual amount of blood and mild pain. Since then normal periods occurred with exception of July and August, 1960. I saw her on August 30 with the diagnosis of hypothalamic amenorrhea which is not infrequent in college freshmen girls. Sue admitted that during that summer she was much worried about going to an out of town college. Again reassurance and sympathetic explanation were given. She did menstruate that September and ever since. I talked to her recently during her vacation. She is well adjusted in college, makes good grades, gets along well with people and enjoys the school. This is a representative case of hypothalamic amenorrhea which is fairly common in adolescent girls.

A simple classification of different kinds of amenorrhea follows:

1. Pseudoamenorrhea is really a regular menstruation with blood accumulated behind an unperforated hymen with a bluish bulging at the vulva area. Hormones are normal and treatment is of course surgery.

2. Uterine amenorrhea is due to aplasia or hypoplasia of the uterus with normal estrogen, progesterone and FSH. If one gives 5 mg. estradial intramuscularly no bleeding will occur because of the absence of endometrium. The treatment is of course supportive.

3. Ovarian amenorrhea: complete ovarian

amenorrhea may be due to ovarian agenesis, tuberculosis, mumps, undulant fever, poliomyelitis, PID, or masculinizing tumors of the ovary with low estrogen and progesterone but high FSH. Progesterone test by giving 50 mg. progesterone intramuscularly will not produce bleeding because there is no estrogen to prime the endometrium. Treatment is substitution. Relative ovarian amenorrhea with low progesterone and low but enough estrogen to maintain a normal FSH may be due to metropathia haemorrhagica with periods of long continued bleeding or Stein-Leventhal polycystic ovaries with hirsutism, obesity and large ovaries. Progesterone will cause bleeding because there is enough estrogen to prime the endometrium. The treatment for metropathia is progesterone and the treatment of ploycystic ovaries is wedge resection.

4. Pituitary amenorrhea is due to pan-hypopituitarism, cyst, adenoma or infarct with low PBI, estrogen, progesterone, 17 ketosteroids, 17 hydroxycorticoid and FSH. Progesterone test will cause no bleeding and treatment is substitution.

5. Hypothalamic amenorrhea is due to lack of luteinizing hormone in response to emotional stress. The estrogen level is normal and is capable of keeping a normal level of FSH but is biologically ineffective to prime the endometrium to give a progesterone withdrawal bleeding.

6. Systemic amenorrhea is due to hypothyroidism and hyperthyroidism, nutritional deficiency, anemia, severe infection, rapid change of weight, adrenal disorders and other systemic conditions.

7. Amenorrhea due to pregnancy, with the increase incidence of pregnancy in the adolescent age,[6] should always be kept in mind. Progesterone injection will not cause bleeding and pregnancy test and other symptoms, signs and history will confirm the diagnosis.

Sue's amenorrhea was clearly not a case of pregnancy, pseudoamenorrhea, complete ovarian amenorrhea, uterine amenorrhea or pituitary amenorrhea because she did and does menstruate. It is not a relative ovarian amenorrhea where enough estrogen is produced to prime the endometrium but no progesterone is produced because of lack of ovulation. Progesterone injection in these cases will be followed by bleeding three to seven days later which is not true in Sue's case. She bled on December 5 ten days after progesterone and the fifth day of the month has been her usual start of normal menstruation. Sue is a case of hypothalamic amenorrhea because of (1) lack of finding of other causes of amenorrhea, (2) occurring at the time of emotional stress, and (3) menstruating again according to her own rhythm after the stress situation is relieved. The reason she didn't bleed after progesterone is due to her own progesterone produced by ovulation. I would predict that Sue will menstruate normally with occasional skipping in periods of emotional stress and will have children, if married, as any other normal woman.

The second case is John, 13 years old, a handsome, big and attractive boy who came to me in January this year because of his mother's worrying about his lack of confidence in himself and failure in school. John's past history was normal until at 5 years of age he fell on the concrete floor of the basement and when his mother tried to pick him up she slipped and John fell again on the back of his head causing a large swelling. There were no signs of concussion. Six months later his mother noticed John tired easily and was irritable. At 6½ years, in April 1954, thyroid was prescribed by a pediatrician because of –39 B.M.R. Repeat B.M.R. in December 1954 was –21 and in October 1955 –14. The mother recalled that John for some unknown reason did not take thyroid for more than six months. At 8 years the mother complained that John failed second grade with short attention span and behavior problem. Physical examination at that time was normal. WISC in October 1955 showed 94 verbal and 107 performance. Achievement tests showed 2.5 for reading, and 1.8 for arithmetic. Psychologic tests suggested intracranial pathology, and undue emotional attachment to the mother. The test results also suggested that John has been utilized by the mother for her own affection satisfactions in a contest of marital disagreement. Both John and his mother were then treated by a psychiatrist for six to eight months without any benefit according to the mother's statement. EEG in November 1955 was reported "non-focal dysrhythmia which may be related to an organic basis for symptoms." John suffered repeated injuries and in September 1960 lumbar epiphysitis or Scheuermann's disease was diagnosed four months after he hit his back on a tree.

Since 8 years old John has always been a failure in school and a problem at home. He was afraid of the darkness and became panicky when injured. His mother stated "Maybe I am overprotective. I don't want him to be upset. A few years ago I helped him to take a bath because sometimes he is so tired. His father is a brilliant man but doesn't have a whole lot of patience. He thinks John is lazy and will snap out of it." During my interview with John he said "My biggest problem is passing school. Most of the school kids don't like me because I am so sick and I fail in grades. I hear noises. I am more close to my mother. My father slaps me about once a month. I frequently had sad dreams. Once I dreamed my father's hand was caught in a furnace and his whole body burned and I cried and awakened." Physical examination and routine laboratory tests done in my office January 1961 were essentially normal. The growth and development showed weight 88 percentile and height 92 percentile and pubic hair and genital development at stage 3. John is now in the sixth grade and has failed all subjects. His mother blames herself for all his problems because of his fall, the result of her carelessness. The doctors and psychologist she consulted confirmed her belief that his brain had been damaged. She overprotects him to ease her guilty feeling and at the same time she is resentful because of his overdependency and scholastic failure. The father, a prominent lawyer, refuses to accept John's retardation and resents the mother's overprotection. However, he himself fails to give John his affection or help. John, big and slow, overprotected by his mother, neglected and overstimulated by his father and ridiculed by the school children is really on trial.

Repeated WISC in January 1961 showed a verbal of 75 and performance of 89 with much scattering. This psychologist commented "He performed at the age level in the Block Designs and at no instance in any of the tests were there signs of organic brain damage." Since verbal I.Q. correlates closely with school success, John's mental age is equivalent to a 10 year old. Achievement tests now showed reading 4.0, spelling 2.5 and arithmetic 4.1. Bone age in November 1959 was reported to be 11 to 12 years with chronological age of 12 years and 3 months. PBI in January this year was 3.7, cholesterol 160, and B.M.R. −22. Vision and hearing were normal. My diagnoses are (1) scholastic failure due to brain damage, hypothyroidism and emotional disturbances, but which of the three is the main cause I am not sure, (2) brain damage syndrome: the history of the fall, dysrhythmia in EEG, hyperactivity, short attention span and mental retardation with scattering on WISC do suggest brain damage, (3) hypothyroidism: tiredness, borderline low PBI, low bone age and low B.M.R. suggest hypofunction of the thyroid, (4) emotional disturbances: this is demonstrated by the extreme dependency toward his mother, desperate striving for father's attention, underlying fear of people and of aggression and the struggle of his inner turmoil shown by projective tests. The emotional disturbances which are probably secondary to the basic pathology further lower his mental achievement.

For therapy I interviewed the father and explained to him that mental retardation always becomes more apparent as the child grows older because of more competitive learning in the school. I also told him that emotional disturbances will definitely further lower one's achievement. The unfortunate emphasis of brain damage expressed by the doctors and the psychologist fixed the mother's opinion and increased her guilty feeling. I told him that the guilty feeling of the mother made her overprotective. I advised him to spend more time with John and give more support to the mother, and have a tutor to help John in his school work. I told the mother that both this psychologist and I are not sure at all that John's problems are due to the fall. This right away eased her guilty feeling. I also told her that no parents are good teachers and so I would like her to leave the teaching to the tutor. I put John on daily thyroid and Benedryl and Benzedrine as necessary. I do not restrict his physical activities as long as they don't cause pain or discomfort of the back.

All these arrangements were made with John's knowledge and approval. Recently I saw John and his mother and both stated that things are much improved. The tutor reported that John does much better alone than in class and the last report card showed definite improvement. She also reported that one time he hurt himself in school and instead of calling his mother as in the past he asked his teacher to put a bandage on and stayed in school. She also told me that the mother wants to keep on teaching him spelling which I granted.

I think this case illustrates many interesting physical and emotional illnesses in adolescence as mental retardation, scholastic failure, hypothyroidism, brain damage, epiphysitis, parents' guilty feeling and their refusal to admit reality. I am not going to discuss these in detail but I do want to mention one study about mental retardation made in Onondaga County of New York in 1953 by the New York State Department of Mental Hygiene.[7] The overall prevalence rate of retardation in that study was 35.2 per 1,000 estimated population under 18. Abrupt rise occurred at the age of 5 (22 per 1,000) with the start of school and another rise at 9 years of age without apparent reason. The incidence reached its peak at 15 and then declined after the school system had ceased to be a factor in recognition.

In conclusion I would like to emphasize that adolescence is an exciting and complex period of life. The low mortality in this period does not mean low morbidity. In fact, adolescents do have mortal and serious illnesses. In the last two years one girl of 14 died of acute leukemia, another girl of 13 died of adenocarcinoma of the colon after an operation and vincaleukoblastine and another girl of 13 was operated on for teratocarcinoma of the ovary and is now receiving x-ray and Actiomycin D. Also a boy of 13 was admitted because of alcoholism and a girl of 14 with severe school phobia probably schizophrenic. Other conditions like increased incidence of accidents and of venereal diseases, problems of growth and development, learning

*(Continued on page 144)*

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# Care of the Aging

## *Special Article*

The State of Missouri was "favored" with two different types of conferences regarding "Opportunities for Senior Citizens" during the months of November and December 1961.

The first conference was held in St. Louis on November 7 and was billed in the press as the "Ribicoff Road Show." Dr. R. O. Muether, M.D., St. Louis, Past President of the Association, and president of Missouri Medical Service (St. Louis Blue Shield) presented a statement of opposition to the King-Anderson bill, H.R. 4222, which was widely quoted in the press.

**Several conferences in connection with various phases of care of the aged citizen were held in Missouri recently. At some of the pertinent conferences, statements were presented by physicians, and some of these statements are presented.**

The second series of conferences were held in six Missouri cities by the U. S. Senate Special Committee on Aging. United States Senator Edward V. Long, of Missouri, presided at each of these hearings, which were held in Kansas City, December 6; St. Louis, December 8; St. Joseph, December 11; Springfield, December 12; Hannibal, December 13, and Cape Girardeau, December 15.

Members of the Committee on Aging developed formal statements which were presented at four of the hearings. Formal statements were not presented by the Association at the St. Louis hearing which was on "Housing for the Elderly," nor at the Springfield hearing which was on "Nursing Homes."

Each of the sessions ran for about two hours in the mornings, at which time the billed topic was adhered to. However, the afternoon sessions were in the form of "town hall" meetings. Any and everyone was invited to present his views on problems of aging.

Because of the wide interest in the King-Anderson bill, and the publicity in the press regarding these conferences, the formal statements of the Association's witnesses are presented.

### Statement of Raymond O. Muether, M.D., St. Louis

### Presented in St. Louis, November 7, 1961

*Mr. Chairman, Members of the Panel, Ladies and Gentlemen:*

I am grateful for the opportunity to make a brief statement in connection with one of the topics—and certainly one of the most controversial topics—assigned for discussion at this afternoon's meeting. That topic is—the proper role of the federal government in connection with health care for the aging. Specifically, I want to narrow my remarks to the proposal H.R. 4222 in the 87th Congress, also known as the King bill—which would extend certain health services to all beneficiaries of Social Security.

As a long-time volunteer worker and officer of the nonprofit St. Louis Blue Shield Plan, I believe I may claim substantial first hand knowledge of prepayment health care needs in this state. As immediate Past President of the Missouri State Medical Association and current chairman of its Public Service Committee, I have had further direct experience with the subject. And, as a practicing physician who sees hundreds of older patients in the course of every year, I have, I believe, direct and personal knowledge of the needs and wishes of senior citizens.

It is, thus, with a background of substantial experience that I submit flatly to this panel and to this meeting that the proposed compulsory inclusion of all Social Security beneficiaries in a program of federal health care is wrong. And I urge the representatives of the national administration here present to reexamine their stated policy in this regard and to reject Social Security as an appropriate mechanism for providing health services to older people.

It would take too long to argue the case against the Social Security approach in detail. I shall submit simply three fundamental reasons for my position.

First, to provide health benefits—as distinct from cash payments—to Social Security recipients is a direct affront to the dignity and independence of this large and growing group of our citizens. It is to say, in effect, that though they may be trusted to use their Social Security checks with independent intelligence for everything else they require, they cannot be trusted to do so in seeking needed health care. In this regard, they are to become wards of the government and be cared for directly with the provision of services.

This, I say, is an affront. Social Security benefits come from taxes that have been paid by the beneficiaries themselves and their employers. If benefits need to be increased to provide an adequate living standard in retirement, let them be increased. Let our older people receive more money if the Congress believes this is necessary. Then let senior citizens take care of themselves as free Americans. Older people do not want to be segregated from the rest of us. They do not want to be cared for directly by government services.

Second, not only is the Social Security mechanism not wanted in this connection, it is plainly not the appropriate or economical means to achieve the stated goal. Everyone of us will agree, I suppose, that there is some place for federal assistance to aged persons who lack resources to maintain a decent living standard and to pay for health care. It most emphatically does NOT follow, however, that to give direct service to all older people regardless of need makes any sense whatever.

If there is a group in our society whose health care needs cannot be met through local facilities, state welfare aid and voluntary prepayment—and such a group can be only a small fraction of the total older population—then let the federal government assist the states as it is presently doing through the Kerr-Mills program to provide extended welfare assistance to the needy and the near needy. Then our tax money will help where help is needed. It will not go into a massive program that ultimately would make us all end our lives in greater or lesser degree as wards of the state.

Third, and finally, following along the Social Security approach could mean only the progressive adding of services and, inevitably, the extension of health services to other age groups until it supplants entirely the wonderful and vigorous system of voluntary and private mechanisms for prepayment of health care—mechanisms that have grown and are growing rapidly in the best tradition of American local responsibility and individual and community action.

Briefly, in conclusion, my case is that the direction of the Social Security approach is wrong. To make any start in this direction—no matter how modest such an initial step may be claimed to be—is inevitably to start the nation going down a disastrously wrong track.

It will, first, segregate our older citizens as a special class of state wards.

It will, second, wastefully require tax increases to provide benefits to all older citizens regardless of any real need.

Third, it will inevitably lead to the elimination of the vigorous and growing voluntary institutions in every community of our nation, institutions that are, like our own Blue Shield plan, providing ever more adequate protection geared to the individual needs of older citizens.

The voluntary health institutions of America deserve to be defended against encroachment by the federal power.

## STATEMENT OF J. H. SUMMERS, M.D., LEBANON Presented in Kansas City, December 6, 1961

*Senator Long, Members of the Committee:*

I am Jacob H. Summers, a resident of Lebanon, Missouri, where I have been a practicing family physician for 30 years. This year, in addition to serving my patients in the south-central portion of our state, I have the privilege of serving as President of the Missouri State Medical Association.

In behalf of the more than 3,800 doctors who are members of the Association, I want to thank you for this opportunity of presenting a brief statement at these hearings. My colleagues and I applaud efforts such as this to ascertain the real needs of our senior citizens in matters of health, housing and income.

It is my sincere hope that these hearings will help pinpoint the specific problems that may actually exist and, to the exclusion of emotional assumptions, cast more light on questions that involve the health and welfare of fellow human beings.

As a physician, I should like to narrow my remarks primarily to the health care aspects of federal-state relationships in the field of aging. Although health care is a tremendously broad and complex area, in the interest of time I shall touch on only three basic points. These are: First, private, voluntary health insurance protection; second, the available local and state resources for meeting the health needs of our aging citizens, and third, the proposed federal Social Security approach to health care.

To place these topics in proper perspective, perhaps one should first enumerate a few facts regarding those who are over age 65 in Missouri.

The latest census figures show that one of every eight Missourians today is 65 or more years of age. This is a higher ratio of older people than any other state except Iowa—and would indicate, incidentally, that our standards and availability of care are as good as, if not better than, one will find anywhere. In all, Missouri has approximately 503,000 people who are over 65.

Relating these facts to voluntary health insurance protection, let's look at what has been accomplished in a few short years by private health protection plans such as Blue Cross and Blue Shield and the commercial insurance companies.

Since their inception about 20 years ago, voluntary plans have grown until, today, 134 million Americans have some kind of protection against the costs of illness. This constitutes about 74 per cent of the population. Even more significant has been the constant rate of growth of prepaid health protection. In recent years, for instance, the number of people covered has increased by 3 to 5 per cent each year—and this growth is bound to continue for years to come, if not hampered by unwise governmental action.

This same situation applies throughout the country to those over 65. Even though health coverage of older people is relatively new, already 53 per cent of the people who are between 65 and 74 years of age have protection, and more than one third of those 75 and over are covered. These percentages, too, will grow rapidly in the next few years if the voluntary plans are allowed to do the job they have already started so well.

The extent and adequacy of coverage is also growing rapidly. In 1959—the most recent year for which I have been able to get comparative figures—$5.2 billion in health insurance benefits was paid out. This is a 90 per cent increase in benefits over 1954. During the same five-year period, the number of people covered increased 26 per cent.

In 1959, health insurance benefit payments accounted for 53 per cent of the public's total hospital bill, compared with just 40 per cent in 1954. Voluntary health insurance benefits also covered 28 per cent of all physician charges in 1959, as against 21 per cent in 1954. These statistics indicate that year by year, voluntary insurance is increasingly paying a greater portion of hospital and medical bills.

What has occurred on a national scale is also happening here in Missouri. Today, more than 80 per cent of all Missouri residents have some form of voluntary health insurance protection. Of those who are over 65 in our state, approximately 48 per cent have this type of private insurance—or 230,000 retirees and other senior citizens.

I think one should bear in mind, too, that the majority of these older folks have been attracted into voluntary insurance programs just within the last five to seven years. So it is reasonable to expect that a much higher percentage of them are going to have the advantage of private insurance protection as time goes on.

Now I do not want to imply that voluntary insurance is the complete answer to the health care needs of our aging population. A certain amount of need continues to exist, although I believe it has been exaggerated in many quarters. Other workable programs must be relied upon to solve, for example, the needs of people who—at least temporarily are unable to pay full premiums for private insurance coverage. (Incidentally, I find it tremendously gratifying that even though our over-65 population is increasing every year, the number of older people who must rely on public assistance has been dropping steadily in our state for the last seven years.)

This brings us to the second topic I should like to touch on for a moment, namely, local and state resources for assuring adequate health care to our older citizens.

At the present time there are about 112,000 people over 65 in Missouri receiving Old Age Assistance. These people have the benefits of our state's present Vendor Medical Care Program, which provides full hospital care for acute serious illness for 14 days for each confinement. In addition, of course, the program makes payments of up to $100 a month for patients who are totally bedfast in a nursing home or in their own homes.

As to physicians' care for our indigent aged, I am convinced that doctors always have and always will see that no patient, regardless of income, is without needed care, provided the patient asks for it.

In addition to these existing sources of care, throughout the state there are literally hundreds of privately sponsored or tax supported local agencies equipped to furnish every conceivable type of health service. These agencies, too, stand ready to assist those who need care.

Still, there is perhaps room for expanding and improving our local and state health programs. There are some older people, for example, who have adequate incomes to meet everyday living costs, but who could not afford the extra expense incurred in times of sickness or injury.

Actually, in all such problems of providing health care, the question is simply one of money. Thus, we must view our solutions not only in terms of federal and state relationships, but also federal relationships with the individual citizen. In this area the question seems to be one of who is to provide the money, and who is to spend it.

One solution to the problem of providing additional funds for health care would be to remove the present $1,200 limitation on every Social Security recipient's earnings, so that he could, if he wished, earn additional income himself. Our self-respecting senior citizens would undoubtedly prefer this to any program in which the government decides that older people are incapable of handling money themselves—therefore, the government must restrict their incomes and, instead, make them wards of the state.

Another way one might solve the problem of funds for health care would be to increase monthly cash payments to those on Social Security and *trust* our over-65 people to spend this money on the things they need, including health care. Still another solution lies in further implementation of the Kerr-Mills Law passed by Congress in 1960.

The Kerr-Mills Law provides everything in the way of health care and services that our older people need. It provides assistance to those who need help, without involvement of those who neither need nor want to be involved in a huge, costly, compulsory government medical program.

Further implementation of this law in Missouri is currently under study by a special interim committee of the Legislature, and, I believe, there is an excellent probability that the present health care assistance program will be expanded as a result. Further implementation care, in effect, extend the present Vendor program both to our needy and near-needy groups and permit our tax dollars to help where help is actually needed, without having to resort to massive programs that ultimately would make us all end our lives as wards of the federal government.

Third, and last of the points I should like to refer to quickly, is the proposed Anderson-King bill, which would tie health care for many of our aging citizens to the Social Security program. I have a feeling that a large number of people who have discussed this proposal have not thoroughly studied the bill's provisions or objectively weighed its effects.

For instance, here in our state we have approximately 400,000 retired persons—about 80 per cent of those over 65—receiving Social Security. Thus, 20 per cent of our senior citizens would be ineligible for health benefits under Social Security. And those who would be eligible would have to pay amounts ranging from $20.00 to $90.00 for each period of confinement or other type of health service.

The specific provisions of the proposal are, however, not as important as an assessment of its over-all effects. It is a proposal that would, for example, violate for the first time the principle of providing Social Security benefits in cash, as opposed to furnishing goods and services. I wonder what our over-65 citizens would say to a proposal that would reduce their present cash benefits and furnish instead actual food and clothing? Yet this is exactly what the Anderson-King bill proposes with respect to health care.

It is also a proposal that would inevitably mean government interference—and ultimately government control—in the relationships between a patient and those who provide his health services. It would be inordinately expensive and lead to unnecessary overuse of our medical facilities. It would be compulsory for everyone, whether or not they needed or wanted to participate in the program.

As one who has given much thought to this proposal and who has searched out the answers to the best of his ability, I submit that adoption of the Anderson-King proposals would be a terrible mistake for our country.

It would, as many of the bill's supporters have openly admitted, inevitably mark the first step toward socialization of our private health care system, not only for our aged, but for every citizen. It would place a heavy—and unnecessary—financial burden on taxpayers for establishing a system to pay for health care for many who do not actually need help in providing for themselves.

We are already equipped to handle—through private voluntary means, coupled with the Kerr-Mills Law and our own local and state resources—all the things that the Anderson-King proposal professes to do for our aged people. Our own self-reliant efforts should be encouraged by the federal government and given a full opportunity to eradicate what problems remain. There is no necessity for imposition of a compulsory, tremendously expensive, unnecessary federal program that takes away the right of every citizen to act for himself, in the personal provision of his own health care.

### Statement of C. Gordon Stauffacher, M.D., Sedalia

**Presented in St. Joseph, December 11, 1961**

*Senator Long, Members of the Committee:*

I am Gordon Stauffacher, a resident of Sedalia, Pettis County, Missouri, where I have been in the general practice of medicine since 1933. As nationwide efforts continue to focus on health care for the senior citizen, Pettis County is and has been taking care of its own, not only the aged, but all who need medical care and are unable to pay for it, through its Medical Indigent Plan. We feel Pettis County has blazed the trail with its own program, a unique and successful one, which has been gratifying to all concerned.

The Medical Indigent Plan was instituted in Pettis County in 1955 when the President of the Pettis County Medical Society, and the Director of Welfare met with the County Court Judges and established a plan on a three months trial basis to see if it would work. It proved to be a wonderful thing for the community, knowing that any one who needed medical care and was not able to pay for it would receive it. Respite dire predictions of abuse, mismanagement and prohibitive costs, the plan has been successful from the beginning. The cost has not been excessive and there has been little abuse, if any, and no mismanagement.

The plan required the cooperation of various agencies, including the Pettis County Welfare Agency, the Bothwell Memorial Hospital authorities, the Pettis County Medical Society, the Pettis County Osteopathic Society and those local druggists who wished to participate in the plan. As a starting point, it was agreed by all parties concerned that there must be some agency to determine who was medically indigent. Since the Pettis County Welfare Department was already established and a functioning organization whose mission was welfare, it was decided that the Welfare Director would assume and render the final decision as to the eligibility of any patient who was to receive aid under this agreement. Each participating organization agreed to accept this decision as final. One requirement was that such person be a bona fide resident of Pettis County, and a resident of the State of Missouri for one year prior to making application for medical assistance. In emergencies there have been some exceptions to this ruling. The Pettis County Court agreed to assume the responsibility for the financial obligations for hospitalization incurred by medically indigent persons certified by the Pettis County Welfare Department, on the basis of the provisions set up in the contract to which all parties agreed. The members of the Pettis County Medical Society and the osteopathic physicians agreed to provide all professional services of medical, surgical and obstetric nature necessary for patients who had been certified as medically indigent and requiring hospitalization. Such service is provided at no cost to the Pettis County Court, since traditionally physicians have always been ready and willing to provide professional care to those in need and financially unable to pay for such care. In instances in which specialists' consultations and treatment was required by such medically indigent patients, such services would be furnished at no cost by those specialists who were on the consulting staff of the Bothwell Memorial Hospital.

The Pettis County Medical Society recommended one of its members for appointment to the position of County Physician to care for those medically indigent who had no family physician or who had been referred by a member of the Pettis County Medical Society to the Welfare Department for medical services. This physician was to be paid on an individual fee basis, and would submit an itemized statement each month to the Welfare Director for approval and payment by the Pettis County Court. The Bothwell Memorial Hospital agreed to provide regular hospital services to those certified, at a flat per diem rate of $10.00 per patient day for such hospital care, which included all laboratory, operating rooms and x-ray service. Out-patient care was to be provided on an agreed schedule, with x-ray, laboratory and anesthesia at 50 per cent of the regular hospital charges.

The Sedalia and Pettis County druggists who agreed to participate in the plan agreed to fill all prescriptions for the certified medically indigent at cost plus 5 per cent. Statements for prescriptions were to be itemized and submitted to the Welfare Director for certification for payment at the end of each month.

During the initial year in 1955 the total cost for the operation of the program was $11,022.91. One hundred thirty-one persons were hospitalized, 164 persons were cared for by the County Physician and 490 prescriptions were filled. During 1960 the total cost of the program's operation was $25,648.67. Two hundred eighty-three persons were hospitalized, 453 persons were given services by the County Physician and 2,083 prescriptions were filled. For the first six months of 1961, the total cost has been $16,491.06, with 170 patients hospitalized, 291 patients seen by the County Physician and 1,566 prescriptions filled.

There have been no administrative costs to the county for the services of the Director of Welfare.

This is an example of what can be done on a local basis and the citizens of Pettis County have every right to be proud of their Medically Indigent Plan. No one in need of medical assistance has been deprived of it because of lack of financial resources. It has been the wonderful and unselfish effort of all the participating organizations that has brought about the success of the plan. Every taxpayer in Pettis County can feel that he has a part in it, for it is the taxpayer's money that the Pettis County Court, in its good judgment, has designated for this purpose and included in its over-all budget.

It is my feeling that with the known year to year increase in enrollment in voluntary health insurance plans, and especially recently in enrollment of those over age 65—and with the present availability of the Vendor Medical Care Program and anticipation of further implementation of the Kerr-Mills Law—that health care for the aged can adequately be accomplished on a local basis. On a local basis it can be done with greater efficiency and at a lower cost than such proposals of the Anderson-King type which would be compulsory, tremendously expensive, and would take away the right of every citizen to act for himself in the provision for his own personal health care.

I want to thank Senator Long and the members of the Committee for the opportunity of presenting at this hearing, this brief résumé of a plan of health care not only for the aged, but for all medically indigent regardless of age, that has been successful on a local basis since 1955, and which I am certain, will continue to be successful in the future. I would like to respectfully request, sir, that you and the Committee consider the sponsorship of legislation that would encourage and support the formation and operation of local programs, such as we have in Pettis County, throughout the nation, rather than massive, unnecessary federal programs such as the Anderson-King proposals.

## Statement of Stanley S. Peterson, M.D., Springfield

**Presented at Hannibal, December 13, 1961**

*Senator Long, Members of the Committee:*

I am Stanley S. Peterson a resident of Springfield, Missouri, where I have been a practicing physician for 16 years. This year, in addition to serving my patients in this area, I have been privileged to be the Chairman of the Committee on Aging for the Missouri State Medical Association. I have also been in this position for several years previously. It is as Chairman of this Committee that I appear here today.

I am happy to speak on "Income Maintenance for the Elderly"—and you will note that I use the word "maintenance" rather than "retirement income," because this then is a continuation of the plan which they should have been worrying about all of their lives rather than a change in financing their way-of-life at a period in life when change comes hard.

The second reason that I am happy to be talking about income maintenance is that there should be a great deal of altercation about Social Security and medical care in this discussion. There really should be no issue of medical care in this whole thing. It is generally conceded that our present system of medical care in the United States is the best the world has ever known. Of course, this system has its faults, but what system of consequence does not? Even members of the Christian Faith find fault with their faith once in a while; and I am sure the Chairman of this Hearing has constituents who do not always agree with his actions.

Further on the matter of medicine—doctors from all over the world come to learn how we do things. Anthony Eden of England came to our country for surgery, and presently one of the potentates from the Middle East is in one of our large eastern medical centers being cared for.

Our life expectancy is the best of any major country today, and there is none better in even the smaller countries that are completely socialized who have never had a war or maintained more than a token army; and our suicide rate is much lower than theirs. Our morbidity, that is the expectancy of disease, is better than that of any major country of the world. Our lowest income groups are better cared for than many of the so-called middle classes of the world.

Inasmuch as one of our issues is finances, I am one of the people who doubts that there is a premeditated drive for centralization of government power, though occasionally it does seem that way, especially when it is considered that there have been concerted and repeated efforts toward the same end by the same people since 1935.

Now, to the business of income maintenance itself. I agree that people should be allowed to work as long as they are economically productive. Sixty-five years is an arbitrary figure, not justifiable in any way, and well recognized and admitted to be only the starting point for medical care and related services.

A second measure worthy of investigation on income maintenance is the raising of the limit on earned income as related to drawing Social Security benefits. I am sure this would not be a panacea and there are some good reasons for not doing it, but many people think this would help.

A third method of maintaining income would be to provide tax relief for those who spend their money on medical care. This has been rather thoroughly explored, and Congressman Durward G. Hall of the 7th District of Missouri has introduced HR 7756 in Congress which makes this a possibility. The American Medical Association passed a resolution endorsing this bill some two weeks ago, and this is as follows:

> "Whereas, The costs of medical care often place a heavy burden on many of our senior citizens; and
>
> "Whereas, Legislation introduced into the 87th Congress would help alleviate the problem of financing care for the aged, and would assist the aged and their families meeting their own responsibilities; and
>
> "Whereas, HR 7756 87th Congress, introduced by Rep. Durward Hall, Missouri, would amend the Internal Revenue Code to permit a taxpayer to deduct, in full, the amounts paid for the medical hospital care of any person who has attained the age of 65, irrespective of whether that individual receives the majority of his support from the taxpayer as is presently required; and
>
> "'Whereas, This legislation would allow total tax exemptions for all drugs and medicines for the aged; and
>
> "Whereas, The bill would provide additional exemptions for catastrophic medical care expenses; and
>
> "Whereas, Legislation of this kind is in the public interest, as it would help our senior citizens and their families to meet their own obligations without relying upon the government for programs which are federally financed and controlled; therefore be it
>
> "*Resolved,* That the House of Delegates of the American Medical Association go on record endorsing legislation embracing income tax credits for the aged as a practical, effective means in helping meet the costs of medical care, and to support actively efforts to enact HR 7756 and other legislation with similar objectives.
>
> "This would be a practical approach, helping those that need help, and not involving massive governmental programs and bureaucracy."

Another way of maintaining income for the elderly would be to stop—and if possible—turn back the ravages of inflation. This would certainly help the people whose fixed incomes used to be adequate but who now are starting to need a little more money than they had planned on. Certainly it seems that saving a little money would be better than the reckless assumption by government of more and more of their expenses.

If Congress in its wisdom determines that the Social Security income is too low, then let it be raised—but not by a ruse which defeats the system.

A service feature does this:

First, it assumes that planners in Washington are close enough to the Omnipotent that they can foresee what all people in all places will need at any given time in the future.

Second, it assumes that they can supply all of these needs better than those who need it can procure it for themselves.

Third, it assumes that the segment of the people for which planners are assuming care are not smart enough to do this for themselves when they have the opportunity.

Fourth, it assumes that a system untried in our way of life can replace the best medical program ever developed—in fact, it assumes that a centralized program which is a complete failure in providing patient care in Russia is better than our present system of high-level medical care available to anyone, no matter how far back he lives in our Ozarks Mountains.

Fifth, it assumes that our people are willing to be taxed as much as 20 per cent of their income for a social program. Some members of the Department of Health, Education and Welfare are admitting this is possible and probably desirable.

One fallacy being pushed is that older people cannot pay their bills. I am familiar with the tables of the Department of Health, Education and Welfare which are supposed to prove this. I would like to refer you to the findings of Rita Campbell in the Proceedings on the Conference on Aging held in Kansas City, Missouri, in 1959. I believe that her statistics are as reliable as the others.

In addition, in my office I find the following to be true:

| | *0-18* | *19-21* | *22-45* | *46-64* | *65 and over* | *Total* |
|---|---|---|---|---|---|---|
| **Number of unpaid bills** | 76 | 19 | 114 | 46 | 26 | 281 |
| **Per cent of unpaid bills** | 27 | 7 | 40 | 17 | 9 | 100 |

A recent analysis by a local general hospital of its unpaid bills should be of significance to the Committee in considering the ability of the 65 and over age group to pay their bills. The period under analysis was the first eleven months of 1961, and for purposes of this study, patients were broken down into the following five age groupings:

| | *0-18* | *19-21* | *22-45* | *46-64* | *65 and over* | *Total* |
|---|---|---|---|---|---|---|
| Total patients: | 453 | 180 | 914 | 881 | 857 | 3,285 |
| Per cent of patient load . | 14 | 5 | 28 | 27 | 26 | 100 |
| Per cent by number who paid .... | 70 | 69 | 78 | 83 | 85 | 80 |
| Per cent by number who did not pay | 30 | 31 | 22 | 17 | 15 | 20 |

It will be noted from this study that the 65 and over age group shows the best record of payment of any of the five age groupings of patients, with the percentage by number of patients not paying bills in the 0-21 age grouping twice as bad as in the over 65 age group--30 per cent as compared to 15 per cent.

Put another way, the study further illuminates the ability of the over 65 age group to meet their own responsibilities. Again, by age grouping, by percentage of total billing paid and total billing not paid, the results were as follows:

| | *0-18* | *19-21* | *22-45* | *46-64* | *65 and over* | *Total* |
|---|---|---|---|---|---|---|
| Per cent of billing in group .. | 10 | 3 | 23 | 30 | 34 | 100 |
| Per cent of billing collected .. | 73 | 71 | 81 | 84 | 87 | 83 |
| Per cent of billing not collected ..... | 27 | 29 | 19 | 16 | 13 | 17 |

Though representing the group with the single largest billing of the five age groups (the over 65 group being billed 34 per cent of the total hospital billing), they were again the age group that paid the highest percentage of any of the age groups—87 per cent compared to 83 per cent for the average and 84 per cent for the next closest group, the 46-64 age group.

The Federal Reserve Board's annual sample Survey of Consumer Finances reveals that the liquid assets of persons 65 and over have grown faster than the assets of any other age group in the last decade.

A second fallacy being promulgated is that older people want government care. My older patients do not ask me to help them get government care and they ask for aid in accomplishing all the rest of their projects, so I am sure that they would be asking me for help on this project also if they were interested in it. Old people can be quite blunt—and seldom do they spare their doctor's feelings when their welfare is at stake. I am sure that the fact they might know that their doctors were not in favor of socialized medicine would not deter them from telling us that they were in favor of it.

I attended the White House Conference on Aging, January 9 to 12, 1961, in Washington, D. C. While there I participated in Work Group 1-3, which had to do with the financing of medical costs. This group discussed at some length financing medical care for the aged, but the most important thing that I want to talk about was that there was only one man over the age of 65 in the room and he said little. Most of the participants were relatively near my age group.

This battle, as you well know, is not being waged by the old people though certainly it is being waged at them and for them. And after all these years a relatively few are climbing on the band-wagon.

All statistics reveal that Old Age Assistance rolls are decreasing as more people come under Social Security, private retirement plans, as well as company sponsored retirement plans. The ones who are the most needy have always been improvident, and by and large will not be covered by Social Security as they age. These are receiving assistance in our state by our Old Age Assistance Program and our Vendor Program as well as the county and municipal plans and many other public and private programs—and we can look forward to an expansion of some of these plans through the Kerr-Mills implementation.

Personal income for older persons is increasing rapidly. Employer-employee groups are providing health insurance contracts which can be continued after retirement. I am sure these figures are already available to you from other sources and I will not include them at this time.

There have been twenty-one major civilizations recorded since the dawn of history as we know it. Nineteen of these have perished because the citizens of the civilizations became overly concerned with abundance and set out to see that everyone enjoyed the good things of life, whether they earned them or not. When the "take from those who have worked" and "give to those without" became so great that it was more inviting to be one of those on the dole rather than one of the workers, then the government failed.

I wish to thank you, Sir, for allowing me to present this statement.

### Statement of C. Thorpe Ray, M.D., Columbia Presented in Cape Girardeau on December 15

*Senator Long, Members of the Committee:*

I am Thorpe Ray, of Columbia, Missouri. I am Professor of Medicine at the University of Missouri and Chairman of the Department of Medicine. I am grateful for the opportunity of appearing before this hearing to present certain facts which I believe to be of paramount importance to all recipients of the medical care which is available in the United States. Let me qualify myself further by pointing out that I was on the staff of Tulane University School of Medicine from 1945 to 1958. During my tenure there, I was on the Admissions Committee for many years. I was Medical Director of St. Anna's Home, which served 90 elderly ladies and I was also on the Planning Committee for Aging for the New Orleans Community Chest agencies during these years. I was continuously on the staff of Charity Hospital of Louisiana at New Orleans, as well as a consultant to one other hospital of the Louisiana hospital system, and also consultant to Veterans Administration Hospital and to the U.S.P.H.S. Hospital in New Orleans. I mention these appointments because each of these experiences has entitled me to have certain information which I think is pertinent to these hearings.

The points I would submit for your consideration touch on the following basic areas: First, medical education; second, achievements of American medicine; third, some needs of the aging population; and fourth, the medical inefficiency and ineffectiveness of a state socialized medical system.

In regard to medical education, I should like to point out the frequently repeated statement about the need for more medical schools and more physicians. The experience in a great majority of the existing medical schools is that the number and scholastic standing of applicants has declined in the last decade. There are doubtless numerous reasons including emphasis of physical sciences, long and costly education in medicine and many others. As a member of an admission committee interview team, I can tell you that many applicants are concerned about the future of medicine from the viewpoint of freedom. We, in medical education, are expected to graduate more and better physicians but are we going to be able to continue to "recruit" competent students? We are actively recruiting now. I would like to express an opinion that the entry of government into medical individual liberty will make our task more and more difficult, if not impossible.

The American educational system for medicine has developed on the tradition of individual liberty and a direct doctor-to-patient relationship. This has attracted competent people to enter the field of medical education. Any alteration in the traditional concept of doctor-patient relationships will make recruitment and maintenance of a good medical teaching staff more and more difficult. If, indeed, we need more medical schools and more well trained physicians, then I question the advisability of putting insurmountable objects in the path of those who are trying to recruit and to educate future physicians.

Perhaps a few accomplishments of medical practice and medical education should be reviewed. It should be decided whether we wish to perpetuate these accomplishments. We had an average life expectancy of 69.6 years in 1956 (59.7 in 1930). I believe we can regard this as a real achievement. Is this worth perpetuating? One could hardly expect to change a basic concept of medical practice and have all else remain unchanged.

A few decades ago the center of medical research, education and postgraduate training was across the Atlantic. It is now in the United States. I would direct your attention to figure 1, which shows the number of foreign trained physicians licensed in the United States. It would seem pertinent to note that the peak numbers have occurred at times when governments have interferred with individual and medical liberty.

This trend is further emphasized in the progressive rise in the number of foreign trained physicians licensed by state boards as shown in figure 2. The areas of origin of the licenses last year are as follow: Central and South America, 454; Europe, 1,431; Britain, 242; Scandinavian, 60; Far East, 200; Near East, 193; Iron Curtain, 330; total, 2,910. The number of foreign medical graduates in the United States last year for postgraduate training in medicine was about 10,000. There must be an excellence of medical education here to explain these figures. Should this be perpetuated?

I would like to proceed to the third area—some medical needs of an aging population. I would point out that my 13 years as physician

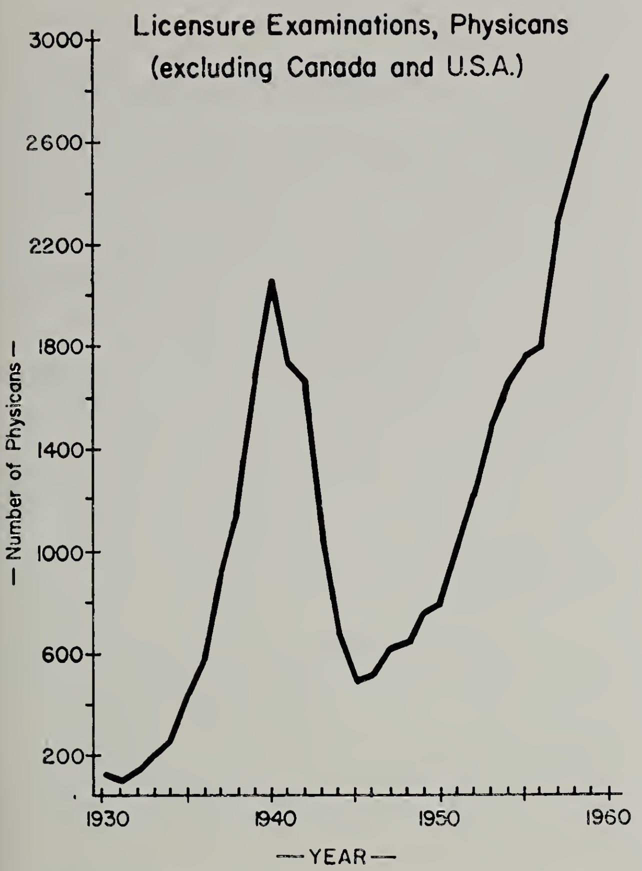

Fig. 1. Foreign students licensed in the United States.

for an elderly ladies home allowed me certain observations which seem pertinent at this time. One must start any discussion by agreeing that we are interested in increasing both the quality and quantity of life. To increase only the quantity without regard to the quality of life is less than kind. In this regard, I would like to point out that the medical needs of many of the residents in the ladies home I served were less than the needs for legal counsel. The straightening out of wills and properties are frequent problems requiring legal counsel. I wonder what is planned to provide such services?

To substantiate my observations I would like to cite the statistics published by the U. S. Department of Health, Education and Welfare, Series C, No. 4 "Health Statistics" from the U. S. National Health Survey. These data were collected from July 1957 to June 1959. Seventy-three thousand households were interviewed involving 235,000 persons. Figure 3 is a copy of one of the graphs on page 2 of that publication. This represents the percentage of persons in each age group with one or more chronic conditions. You will note that 56 per cent of persons 45 to 54 had one or more "chronic conditions" and the percentage rose to 83 per cent of persons over 75. We are indeed a sick people—until we look at what was listed as chronic conditions—hay fever, sinusitis, bronchitis—finally then some more serious illnesses. What do these figures mean in terms of needs for physicians services? Fortunately, another graph on page 2 of the publication showed the average visits to physicians per year (fig. 4). It is readily apparent that persons 45 to 54 years of age visited their physicians 5.0 times per year; 55 to 64, 5.8 times per year; 65 to 74, 6.5 times per year and 75+, 7.3 times per year. This emphasizes the fact that the medical needs are but one small facet of the total needs of the individual, be he 45 or 75—and these figures are from Mr. Ribicoff's department. While the publication did not show data on other needs, I submit that trips to beauticians, plumbing, automotive repairs, etc., would amount to much more than "medical needs." While I am certain that one can find numerous persons who have had large medical expenses, and no doubt some are in the audience, to express their views, I wonder what one might find were he to inquire of the legal counsel expenses, plumbing, automotive repair, television and electrical repairs of the same population. I would respectfully suggest that the

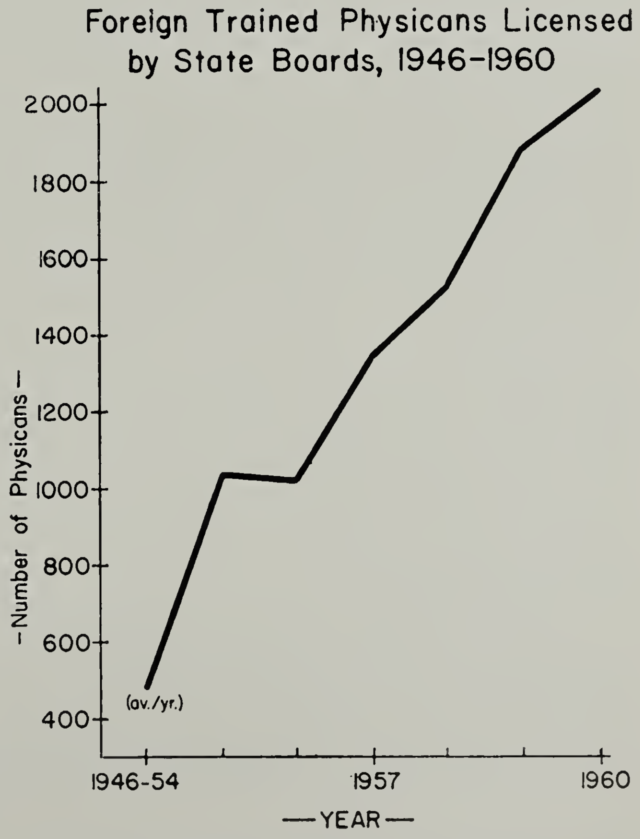

Fig. 2. Foreign students doing postgraduate training in the United States.

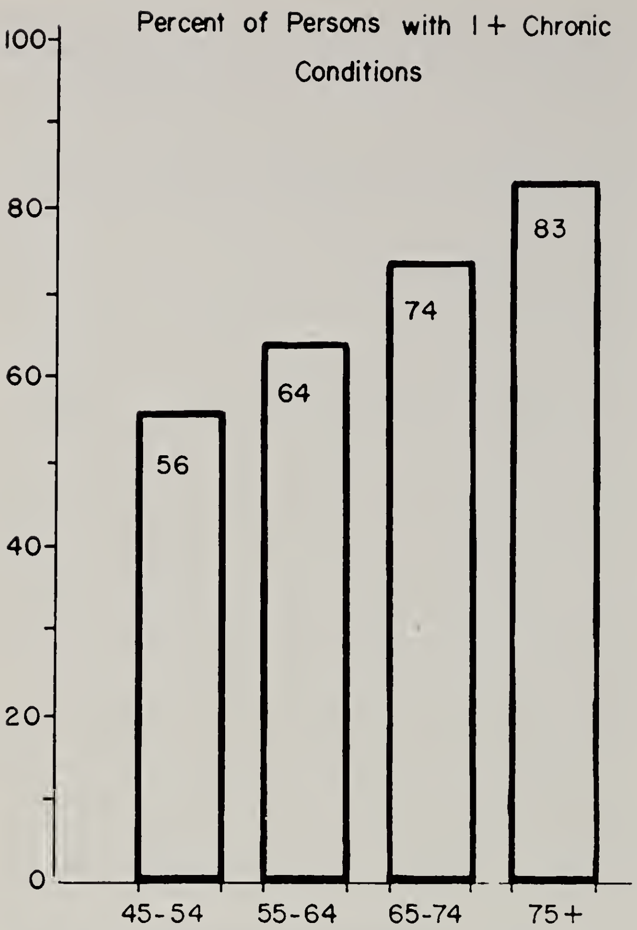

**Fig. 3. Percentage of persons in survey with one or more chronic conditions.**

total needs of the individual, the quality of life, will best be served by attention to his total needs by increasing his income rather than selecting some one facet or fraction of his needs, namely medicine, and ignoring the rest. How many persons cannot afford 6.5 visits to their physician per year?

I would like to make two additional points. In all instances where the government has gotten into medicine there is interference with medical practice. I suggest that a check of drugs available for use in Veterans hospitals and U.S.P.H.S. hospitals will show restrictions. That is a good starting point for anyone who wants to know if there is interference.

Are the calculated expenses and appropriations always sufficient to meet the demand for services? I believe the Medicare program has been out of funds on occasions. Why would it be different in a program which is enormous in scope?

Lastly, I would make one more suggestion. For anyone who really wants to know how state (social) medicine works for the individual, I would point out that we have several highly developed state systems in the United States. Britain could have learned much from Louisiana. Since I worked in this system of hospitals for 13 years, I feel justified in expressing an opinion. It is medically inefficient and ineffective. It does not consider the quality of life, and one must agree that all else is secondary.

Other statements were presented by Drs. Ralph Perry and William M. Kitchen, at Kansas City; Albert M. Repetto and George J. L. Wulff, at St. Louis; Joseph L. Fisher at St. Joseph; John P. Ferguson and Kenneth C. Knabb at Springfield; Henry H. Sweets at Hannibal, and Raymond A. Ritter at Cape Girardeau.

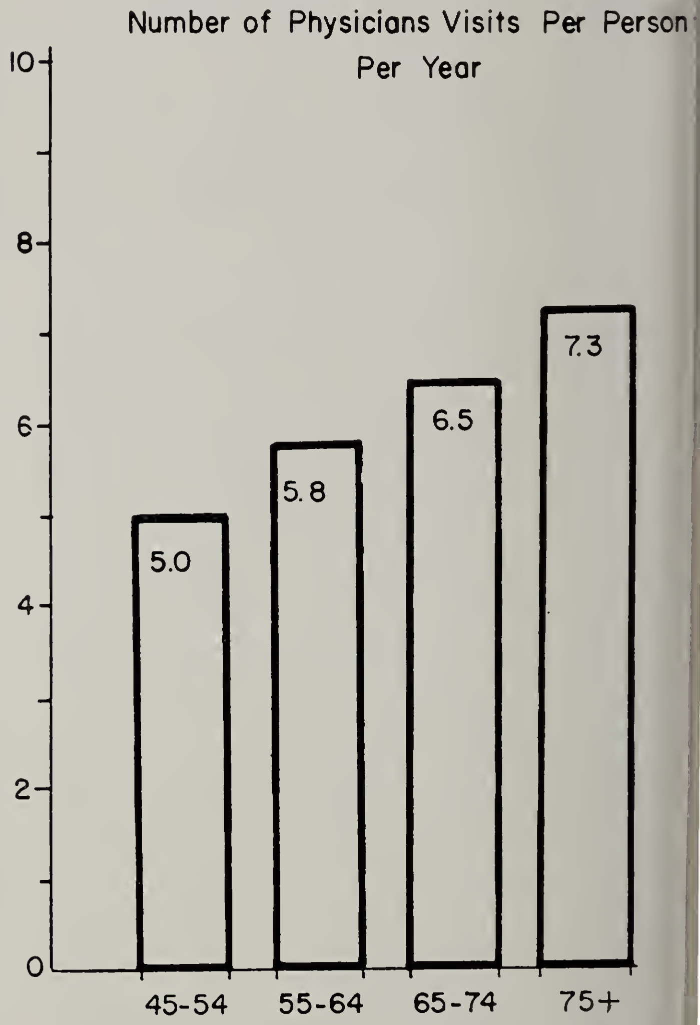

**Fig. 4. Average number of visits to physicians by age groups.**

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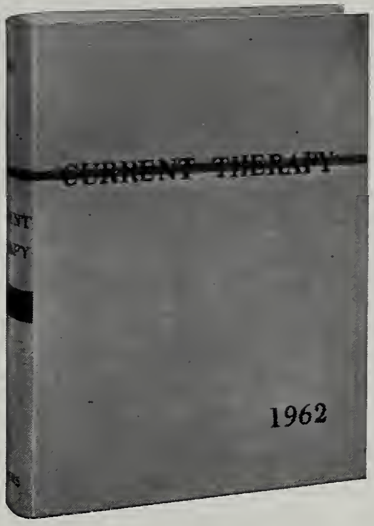

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**SOLOMON GARB, M.D.,** ***Columbia***

# Thermonuclear Survival

## *Special Article*

### THE EFFECTS OF HYDROGEN BOMBS

TO EVALUATE THE effectiveness of any proposed defensive measures, one must know something about the offensive weapons which may be used and the possible methods of delivering them. This problem at first seems complex since there are so many possible variables. For example, bombs range in size from 1 kiloton (1,000 ton T.N.T. equivalent) to 20 megatons (20,000,000 ton T.N.T. equivalent). Each bomb produces a somewhat different pattern of destruction depending on the height at which it explodes. There may be bursts beneath the earth's surface, at the surface, high in the air or under water. Bombs can be delivered by plane, ship or intercontinental ballistic missiles. There may or may not be any warning before the bombs explode.

In the face of all these possibilities, it is understandable that many people become confused about the entire situation. Nevertheless, it is possible to simplify the problem so as to be able to plan defensive measures intelligently. Fundamentally, this involves preparing for the worst while hoping for the best. Thus, the assumptions which will be made are based on the concept that if we are attacked, the enemy will use his maximum power and that all his missiles and bombs will perform perfectly. If, as seems quite possible, the enemy's efficiency is less than perfect our defensive measures will be even more effective than was planned.

The first assumption is that if war comes there will be no humanitarian deterrent. An enemy can be expected to try to destroy us as quickly as possible. It follows that unless protective measures are taken, radioactive fallout would be the major cause of death. Radioactive fallout can kill about 100 times as many people as can the other effects of the bomb. Furthermore, contrary to some reports, there would be no substantial danger to any enemy from distant fallout, that is, a fallout from a bomb explosion in America. Thus, it is foolish to hope that they will use "clean" hydrogen bombs.

The second assumption is that the enemy will use his large bombs. Therefore, we must prepare for attacks with 20 megaton bombs. It may be that smaller ones will be used. In that event, our protective measures will be more effective. It is unlikely that weapons larger than 20 megatons will be used despite the threats about 100 megaton bombs. A law of diminishing returns applies, and beyond the 20 megaton size there is little added destruction. Most of the extra force is wasted in the air. Thus, two 20 megaton bombs would cause much more destruction than a 40 or even a 60 megaton bomb.

The third assumption is that the enemy will try to deliver his bombs with the greatest surprise and least possible warning (remember Pearl Harbor). If bombers are used, we may expect at least a one hour warning. If intercontinental ballistic missiles are used, the warning period may not exist or, if it does, it may be short, certainly not more than 15 minutes. It is encouraging to read that the American government is working on a radar system which will give some warning of approaching missiles. Even a five minute warning would be quite helpful. However, it is not possible at this time to make any definite assumptions about whether or not there will be any warning at all. Therefore, the benefits of defensive measures which will be discussed in a later article will be considered under two headings: effectiveness with some warning, and effectiveness in the absence of warning.

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**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine,* and are published with permission of that journal.**

**Dr. Garb is secretary of Medical Education for national Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.**

**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

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The dangerous effects of a thermonuclear weapon can be considered under several headings:[6]

1. Initial nuclear radiation from the fireball.
2. Initial heat radiation.
3. Firestorm following initial heat radiation.
4. Blast effect.
5. Flying missiles secondary to blast.
6. Radiation from fallout.

TABLE 1

LETHAL EFFECTS OF 20 MEGATON BOMB

| | *Ground Burst No Shelter* | |
|---|---|---|
| *Effect* | PROBABLE LETHAL RADIUS IN MILES | PROBABLE LETHAL AREA IN SQUARE MILES |
| Crater | 0.35 | |
| Absolute destruction of underground shelter | 1.0 | 3.14 |
| Initial nuclear radiation | 2.5 | 20.0 |
| Blast effects | 10.0 | 314.0 |
| Flying missiles | 10.0 | 314.0 |
| Initial heat radiation | 12.0 | 452.0 |
| Firestorm* | Up to 20 | 1,250.0 |
| Radioactive fallout | 140 (oval) | 10,000 to 20,000 |

* This effect is unpredictable

In table 1, the radius and area of these effects are listed. It will be shown that adequate precautions can reduce the dangers appreciably.

It is important to consider each of these effects singly to understand the significance and importance, as well as the limitations, of defense measures.

The zone of absolute destruction which extends up to one mile from ground zero, depending on the soil structure, includes the crater and the disrupted soil immediately around it. No practical defense measures exist in this zone, and any person within the area will probably die within a fraction of a second. The area of about three square miles represents the limitation of all practical defense measures. However, this is a comparatively small area, less than one millionth the area of the United States.

The initial nuclear radiation from the fireball consists mainly of neutrons and high energy gamma rays. These are far more penetrating even than the gamma rays from fallout. Ordinary shelters do not protect against these rays within the 2.5 mile radius. For reasonable protection, about six feet of earth or three and one-half feet of concrete are needed. In some cases, shelters of this nature can be built at a small increase in cost over that of the ordinary shelter.

The blast wave and flying missiles will destroy almost all conventional frame houses up to 10 miles away. Reinforced concrete buildings may remain standing even up to five miles of ground zero. Underground shelters give a variable degree of protection against blast, depending on their design. Those designed only for fallout may be only slightly stronger than a frame house. Those designed to resist blast are, of course, stronger. It is helpful to think of blast effects in terms of pounds per square inch of overpressure. One pound per square inch equals 144 pounds per square foot. As a basis of comparison, the floors of homes are designed to withstand pressures of 40 pounds per square foot (0.28 pounds per square inch). In shelter design, the ranges of blast overpressure extend up to 100 pounds per square inch.

The initial heat radiation from the fireball is released in two separate pulses within a period of a few seconds. This heat is in the neighborhood of millions of degrees in the fireball center and falls off rapidly. Its importance would depend on many factors, including the clarity of the air, the time of year, the presence of buildings and so forth. In theory, the heat radiation on a clear day could burn fatally a nude person at a distance of more than 20 miles. However, cloudiness would reduce its intensity, and, of course, clothing gives excellent protection, as does a building between the person and the fireball.

The initial heat radiation also can produce a firestorm, which is a fire raging over a wide area of a city, at least one square mile, with the air so hot that everything combustible in the area begins to burn even before directly touched by flame. During a firestorm a large area acts as if it were a fireplace. From all sides air rushes in with gale force and speed. This air is heated in the fire and rises in a column over the burning area. The air temperature on the streets may reach 1,400 F. (the maximum temperature in an ordinary oven is 500 F.). In addition to the intense heat, there is a shortage of oxygen in the entire area, and a lethal concentration of carbon monoxide. Firestorms are usually over within six hours. There is one hopeful aspect of firestorms, however. Once established, they do not spread to other areas. The reason is that the winds, usually 50 miles an hour or more, blow from outside the firestorm area toward its center.

Firestorms were produced in Hamburg in 1943 and in several Japanese cities.[7] One firestorm in Hamburg killed 60,000 people. As yet, all the factors involved in the production of a firestorm are not known. Humidity, prevailing winds and terrain all probably play a role. It is not possible to state that a firestorm will occur in any particular area if multiple fires start. On the other hand, it is known that firestorms will not occur unless buildings are fairly close together. If less than 20 per cent of an area is under roof, firestorms will not occur. Thus, most suburban, and all rural areas, will be safe from firestorm unless they contain dry vegetation.

Ordinary shelters do not provide protection from firestorm. If deep enough underground, they might keep the occupants safe from the heat above. However, special measures would be needed to provide oxygen and to protect against carbon monoxide poisoning. The only feasible method of overcoming this problem appears to be the storage within the shelter of a compressed oxygen supply adequate for six hours (the usual duration of a firestorm). One large cylinder of oxygen can supply five people for more than six hours if the exhaled carbon dioxide is absorbed. When apparatus for protection against firestorm is available, it can be fitted into existing shelters.

Although firestorms are frightening things, and although there is at present no adequate protection from them, one must keep them in perspective. Firestorms may not follow a hydrogen bomb explosion. Even if they do, they are relatively restricted in area. A firestorm can kill 60,000 or even 600,000 people. However, it cannot compare in deadliness with radioactive fallout from a single bomb which could easily kill 6,000,000 to 12,000,000 people. The methods of providing protection against firestorm are discussed in detail in a subsequent article. In designing shelters for fallout protection, one will have to consider the ease and economy with which a particular shelter can be adapted to give firestorm protection as well.

The greatest hazard from hydrogen bombs comes from the radioactive fallout. The explosion of a bomb sucks up millions of tons of earth which become radioactive. This material is carried for varying distances by the winds in the stratosphere until it falls to earth. The heavier the particle, the sooner it falls to earth. The fallout pattern usually has the shape of a fat cigar. The area of fallout is not completely predictable since the stratospheric winds may not have the same direction as the ground-level winds.

The fallout from a 20 megaton bomb extends many hundreds of miles beyond ground zero. However, the most intense fallout usually extends to about 140 or 150 miles from ground zero. Ordinarily, within the fallout pattern, the fallout radiation intensity is greater near ground zero.

Persons who are 140 miles or less from the explosion site, and in the cigar-shaped pattern, will probably receive a lethal dose of fallout unless they have some shelter. However, a relatively small degree of shelter, such as an ordinary basement, can save the lives of most of them. On the other hand, in areas closer to ground zero, ordinary basements provide inadequate shelter. Thus, people living about 50 miles from the center of the explosion in the cigar pattern will probably receive a lethal dose of radiation from fallout even if they remain in an ordinary basement.

Accordingly, it should be clear that radiation fallout constitutes the major hazard of a hydrogen bomb and, furthermore, that it is a far greater hazard than all the others combined. It is important to consider just how great this hazard really is. Let us assume that people are equally distributed within the 15,000 square mile area of lethal fallout and have no shelters at all. Less than 1 per cent will be killed within the zone of absolute destruction. Less than 1 per cent will be killed by initial nuclear radiation. Approximately 2 per cent will be killed by blast and flying missiles. An additional 1 per cent might die of initial heat radiation and, if a firestorm occurs, perhaps an added 5 per cent would die. The remaining people, between 91 per cent and 96 per cent, will die of fallout radiation.

As another example, assume that everyone has a good basement and stays in it. This will reduce the deaths from radiation fallout considerably, perhaps to as low as 30 per cent. Even so, many more persons will die of radiation fallout than of all the other effects combined.

Fortunately, simple shelters can give excellent protection against fallout.

It may also be of interest to consider the relationship of bomb size to the range of its lethal effects. Some missiles are designed for bombs smaller than 20 megatons. The radius of any effect of a bomb is proportional to the cube root of its explosive power in megatons. The area of its effect is proportional to the square of the cube root. In table 2, a comparison of different size bombs is presented.

TABLE 2

RELATIONSHIP OF BOMB SIZE TO THEORETIC RANGE AND AREA OF EFFECTS

| *Bomb Size (Megatons)* | *Radius of Effect in Arbitrary Units* | *Area of Effect in Arbitrary Units* |
|---|---|---|
| 100 | 4.64 | 21.53* |
| 20 | 2.71 | 7.34 |
| 10 | 2.15 | 4.62 |
| 5 | 1.71 | 2.92 |
| 2 | 1.26 | 1.59 |
| 1 | 1.00 | 1.00 |

This table may be used to estimate effects of a bomb of a size other than that listed in Table 1. For example, if we wish to estimate the probable lethal radius of the blast from a 2 megaton bomb, knowing that a 20 megaton bomb has a 10 mile radius, we use the proportion $\frac{2.71}{1.26} = \frac{10}{x}$. Thus, the probable lethal radius of blast from a 2 megaton bomb (no shelter) is 4.65 miles.

* Applicable to a flat surface, reduced because of earth curvature.

These theoretic figures are not completely accurate, since they are based on effects on a flat, regular surface. Since the earth is curved, there is a more rapid falling-off of effectiveness with the larger bombs. From the standpoint of strict military effectiveness, there is no appreciable advantage in going over a 20 megaton weapon. The only apparent purpose in such things as 100 megaton weapons is psychologic—that is, the attempt to frighten a civilian population into surrender or into disorganized panic. Even the incendiary potential of a 100 megaton bomb is less than that of five 20 megaton ones.

There are also important indirect effects of hydrogen bomb attacks. It is obvious that most of the ordinary activities of the country will come to a temporary halt. This includes the production and distribution of food. The Federal Civil Defense Administration advises that a seven to 14 day food supply be kept for emergencies. This amount may be completely inadequate. Unless much larger amounts of food are stored, many survivors of the attack will probably die of slow starvation. All standing crops will probably be destroyed or so contaminated as to be useless. Farmers are unlikely to start farming until the radioactivity of their fields has fallen to safe limits. Most farm animals will be dead.[8, 9]

It is true that we have in this country more than two billion bushels of surplus grains, equal to several years supply for the population. The administration has made plans to have this grain stored near the large population centers which would be subject to enemy attack. However, although planned, apparently a considerable period of time will lapse before this movement can be carried out, for various reasons which need not be considered here. Furthermore, even when that stored grain is properly distributed around target centers, it will be enough mainly to prevent death from starvation. It will not be enough to maintain a family in the best possible nutritional status. As the situation stands, at the time of the writing of this article, there are inadequate food stocks in the general areas of target cities, and unless individual families make proper and prudent efforts to store their own emergency food, starvation will become a major cause of death. Fortunately, it is relatively simple, and relatively inexpensive, to store adequate amounts of food in safety. The details will be discussed subsequently.

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The first five references were omitted from the article which appeared in the January issue.

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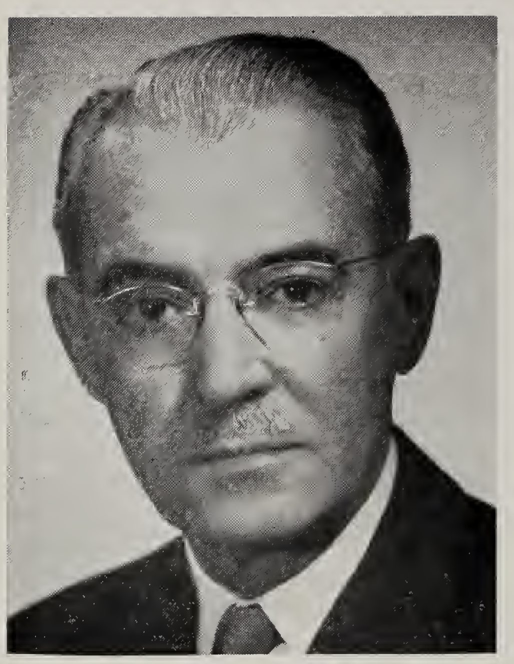
# President's Message



J. H. Summers, M.D.

It was a short respite—between sessions of the Congress. I know it was no respite for many Association members and hope that it was not for many more. The White House Regional Conference in St. Louis on November 11 and the McNamara subcommittee hearings in several parts of the state during the early part of December kept some members definitely alert. Others took the opportunity to talk to legislators while they were away from Washington.

With Congress convening on January 10, it may be that members will be asked to take active legislative action before this issue of Missouri Medicine reaches the membership. But continued action, probably right through the session, is going to be necessary. Missouri physicians worked diligently during the last session of Congress and it is my plea that they do even better during this session—for probably even more work is going to be necessary now. Every indication has been that the placing of medical care of the elderly under social security is a prime target of the Administration for this session. The help of every member of the Association is needed in letting the general public know the full facts of the King-Anderson bill, and in letting his Congressman know his attitude toward it.

J. H. Summers, M.D.

# EDITORIALS

## MEDICAL PROGRESS

Highlights of medical progress during 1961 were brought out in a poll by the American Medical Association of deans of medical schools. The most prominently mentioned strides were the following five:

Rapidly expanding knowledge in medical genetics, so important that the time is approaching when many serious human diseases may be eliminated entirely.

New forward strides in the search for drugs that will cure or prevent cancer.

Development and discovery of new pharmaceuticals, particularly the new live polio vaccine, the measles vaccine and synthetic penicillin.

Important new knowledge about hepatitis which may eventually lead to a vaccine against the only remaining epidemic disease which is still increasing in the United States.

Progress in application of electronics and computers to medicine, a further bringing together of machinery and equipment, skills and technics, men, money and methods to the benefit of mankind.

## H.R. 4222 STILL ALIVE

The Kennedy Administration and other main supporters of medical care of the aged under social security are preparing to make an all-out effort to push the legislation through Congress in the present session, which began January 10.

Administration officials from President Kennedy on down, publicly gave the Administration medical care legislation, the King-Anderson bill, top priority for the 1962 session. This was well evidenced in Missouri with the Ribicoff conference and the McNamara subcommittee hearings conducted in Missouri by Senator Edward Long.

A new organization of the elderly, with former Rep. Aime J. Forand as a leading figure, has been organized—the National Council of Senior Citizens for Health Care Through Social Security.

That physicians and the American Medical Association recognize that this legislation has top priority, a conference is being held as this issue reaches the members of the Association, called by the American Medical Association.

The conference was designated as an attempt to stimulate increased activity on the part of state and county medical societies in connection with H.R. 4222. The conference opened with addresses by Drs. Larson and Howard, and Congressman Bruce Alger, followed by workshops, and then general discussion with workshop reports. Congressman Durward G. Hall, Springfield, was invited to be the final speaker at the conference.

Further information on the conference will be made available to members.

## AMEF, AMRF MERGED

Merger of the American Medical Education Foundation and the American Medical Research Foundation to form the American Medical Association's Education and Research Foundation was announced at the American Medical Association Clinical Session. The merger became effective Jan. 1, 1962.

To the financial support to medical schools will be added the undertaking of raising money for medical scholarships and loans to medical students and interns and residents. The Foundation will seek to broaden its appeal for funds beyond the limits of the medical profession and allied groups.

In addition to the medical school, scholarship and loan programs, the new Foundation will have the following projects:

Perinatal study, accepted as an AMRF project in 1960 and planning an expanded program in 1962.

Medical journalism, an AMRF project established to conduct research in medical journalism and to provide training and experience in the field of medical journalism to selected medical students and postgraduate physicians.

Research grants, an AMRF program offering funds to supplement grants from other sources for clinical and basic medical science research.

Joint study in continuing medical education, planned to develop a conceptual report on various aspects of a national program of continuing medical education, including consideration of a national agency to implement such a program.

AMA-ERF will be set up along the same lines as AMEF and AMRF. The board of directors will be elected annually from the membership of the AMA Board of Trustees.

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nutrition...present as a modifying or complicat-
g factor in nearly every illness or disease state"[1]

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

**rdiac diseases** "Who can say, for example, whether the patient chronically
vith myocardial failure may not have a poorer myocardium because of a moderate
ciency in the vitamin B-complex? Something is known of the relationship of vitamin
the intercellular ground substance and repair of tissues. One may speculate upon
effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic
ase."[2] 2. Kampmeier, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

**hritis** "It is our practice to prescribe a multiple vitamin preparation to patients
rheumatoid arthritis simply to insure nutritional adequacy . . ."[3]
andez-Herlihy, L: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

**gestive diseases** Symptoms attributable to B-vitamin deficiency are com-
ly observed in patients on peptic ulcer diets.[4] Daily administration of therapeutic
mins to patients with hepatitis and cirrhosis is recommended by the National
earch Council.[5] 4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

**generative diseases** "Studies by Wexberg, Jolliffe and others have indi-
d that many of the symptoms attributed in the past to senility or to cerebral arterio-
rosis seem to respond with remarkable speed to the administration of vitamins,
icularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of
g persons is lowered, even to the danger point, more than is the case in the average
erican adult."[6] 6. Overholser, W., and Fong, T.C.C. in Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

**fectious diseases** Infections cause a lowering of ascorbic acid levels in the
ma; and the absorption of this vitamin is reduced in diarrheal states.[7] 7. Goldsmith, G A.:
ence on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec.10) 1960.

**abetes** Diabetics, like all patients on restricted diets, require an extra source
itamins.[8] "Rigidly limiting the bread intake of the diabetic patient automatically
inates a large amount of thiamin from the diet. . . . There is some evidence of
rference with normal riboflavin utilization during catabolic episodes."[9]
can G. G.: Diseases of Metabolism 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

FULL INFORMATION SEE YOUR SQUIBB PRODUCT REFERENCE OR PRODUCT BRIEF.

# Ramblings of the Field Secretary

At its meeting in Denver, November 27-29, 1961, the A.M.A. House of Delegates, among other things, adopted a resolution urging that state and county medical societies continue and expand their recruitment activities designed to interest qualified young people in medical careers and suggests that they consult with the Council on Medical Education and Hospitals of the A.M.A. regarding these important activities.

Missouri delegates, Drs. Kiene, Neilson, Petersen and Magness, at A.M.A. House session.

It is a well known fact that the number of applicants applying for admission to medical schools during the last few years has been on a decline. There are numerous reasons given for this which will not be discussed here. In contrast to the number of declining applicants, the number of accepted applicants has increased regularly for a number of years.

Information from the Division of Basic Research of the Association of American Medical Colleges indicates for the year 1950-1951, 22,279 applicants submitted a total of 81,931 applications to medical schools with 7,254 of the applicants accepted to medical schools. In the year 1960-1961, the 14,397 applicants submitted 54,662 applications to medical schools with 8,560 applicants accepted.

Another interesting point concerning medical students accepted in the medical schools has to do with the decrease in the percentage of "A" students as against "B" students accepted. Information from the Council on Medical Education and Hospitals of the A.M.A. shows that for the school years 1950-1951, of the students accepted into medical school, 43 per cent were "A" students, 40 per cent "B" students and 17 per cent "C" students. In the year 1959-1960, the percentages were 15 per cent "A" students, 70 per cent "B" students and 15 per cent "C" students.

Drs. Kiene and Summers confer in the Missouri room during A.M.A. session.

These statistics give much food for thought and indicate a definite need for some "sales work" on many levels of student attainment toward the product of a medical education.

It is an interesting experience to observe the House of Delegates of the A.M.A. in action. It is equally as interesting and much more informative to sit in on the discussions of the various reference committees. In these committees all sides of various issues before the House are discussed. After this the reference committees report back to the House, recommending specific actions on the various resolutions which were referred to and considered by these respective reference committees. At the interim session in Denver this past November, Missouri delegates were: Dr. Guy Magness, University City; Dr. H. E. Petersen, St. Joseph; Dr. A. W. Neilson, St. Louis, and Dr. Richard Kiene, Kansas City. Dr. Durward Hall of Springfield was unable to serve at this session and his place was taken by Dr. Guy Magness.

# and it is still my stand-by for pain relief today."

PICTURE THE YOUNG DOCTOR with his first private patient, about thirty-five years ago. This is the moment, after years of study and guidance in classroom and at hospital bedside, when he assumes the full weight of responsibility for the well-being of his patient. He makes his diagnosis. The patient is in considerable pain, and his first concern is to relieve this discomfort. He writes a prescription for a new analgesic, a convenient drug combination that he believes will be of help. This patient (and many others to follow) finds gratifying relief, and the physician continues to rely upon this medication as the years go by.

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# News—Personal and Professional

New regional director for Missouri of the American Rhinologic Society is **Daniel D. Klaff**, M.D., St. Louis. Dr. Klaff will serve on the program committee of the society.

The professional staff of the Memorial Hospital, Harrisonville, elected **O. B. Barger**, M.D., as vice president. **J. C. Moody**, M.D., was elected to the executive committee.

The National Society of Crippled Children and Adults recently elected **Richard H. Kiene**, M.D., Kansas City, to its board of trustees.

A guest speaker at the annual meeting of the Ontario Federation for the Cerebral Palsied in Windsor, Ontario, on October 21, was **Robert E. Bruner**, M.D., Kansas City.

Elected chief of staff of the Sullivan Community Hospital is **John B. de la Torre**, M.D., Sullivan. **R. M. Crawford**, M.D., Sullivan, was elected assistant to the chief of staff, and **A. R. Baumann**, M.D., Steelville, was elected secretary.

Board and staff members and special guests attended a recognition program in honor of **Joel W. Hardesty**, M.D., Hannibal, at the Levering Hospital, Hannibal, in late November.

New staff officers of St. Mary's Hospital, St. Louis, are **Charles R. Doyle**, M.D., president; **Paul Murphy**, M.D., vice president, and **Clement B. Grebel**, M.D., secretary-treasurer.

The St. Louis Dermatological Society recently elected **Lawrence K. Halpern**, M.D., St. Louis, president, and **James C. Sisk**, M.D., Clayton, vice president.

"Automobile Accidents" was the subject of a talk presented recently by **Charles B. Wheeler Jr.**, M.D., Kansas City, before the Kansas City Claims Association.

Sponsored by the Akron Academy of Ophthalmology and Otolaryngology, **Herbert J. Rinkel**, M.D., Kansas City, presented a course in allergy at a meeting held Nov. 27 to Dec. 1.

Appearing on a panel on "Medical Aspects of Cerebral Palsy" before a district nurses' meeting in Marshall was **Clement Brooke**, M.D., Columbia.

Speaking on heart disease, **Charles F. Wilson**, M.D., Cape Girardeau, addressed a meeting of the Cape Girardeau Rotary Club in December.

"The Anxious Patient" was the subject of an address by Franklin G. Ebaugh, M.D., emeritus professor of psychiatry of the Colorado School of Medicine. Also taking part in the program at the Neurological Hospital, Kansas City, were Drs. **N. Venay Bolin**, **John D. DeMott**, **Irving Kartus** and **Marvin L. Bills**, Kansas City.

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## MEDICAL CARE OF ADOLESCENT

*(Continued from page 118)*

and emotional problems and juvenile delinquency all deserve serious consideration.

Finally I would like to point out that in order to enjoy the practice of adolescent medicine the following are essential: (1) interest in the adolescents as persons and feeling at ease with them, (2) interest in the diseases common to adolescents, (3) adequate training in both the physical and emotional aspects of general medicine and (4) some formal training in adolescent medicine.

1695 Brentwood Blvd. (17)

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6. Menaker, J. S.: Teen-age Obstetrics, Pediat. Clin. North America **5**:140-141 (February) 1958.

7. Technical Report of the Mental Health Research Unit, New York State Department of Mental Hygiene, 1955.

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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Grand River Medical Society

Spirits, Christmas Spirits that is, were evident when members of the Grand River Medical Society, their wives and guests, met at the Strand Hotel, Chillicothe, on December 14, for their annual Christmas meeting. The festivities began with a social hour followed by a steak dinner, enjoyed by all.

Dr. Summers was the guest speaker.

The tables were decorated by Mrs. Clark and Mrs. Fuson and included candles and candy favors, three of which were marked as door prizes. A transistor radio was raffled off and won by Dr. George Mandler.

At the conclusion of the dinner, Dr. J. H. Summers, Lebanon, President of the Missouri State Medical Association, and Mrs. Summers, were introduced as honored guests of the evening. Dr. Summers gave a brief talk concerning the perils which medical practice, as we know it, now finds itself in and the ever present need for watchfulness and action on our part lest we, and those we serve, lose by default.

Doctors and their wives enjoyed the Christmas festivities.

Drs. Clark, Dowell, Summers and Bohnsack pose for picture.

Mr. Ray McIntyre, Field Secretary of the Missouri State Medical Association, was present and traced the beginnings of the present Grand River Medical Society and gave special credit, for what he termed the outstanding success of the venture, to Drs. William Fuson, Joe Conrad and Donald Dowell. He again noted the increased vigor of the organization that attained when the Woman's Auxiliary was formed.

Dr. Donald Dowell, President-Elect of the Missouri State Medical Association, presented brass panel engraved plaques to Dr. C. L. Clark, retiring President of the Grand River Medical Society, and Dr. Robert Smith, President 1959-1960.

There being no formal business meeting, individual transactions arising from the recent Kansas-Missouri football game were completed.

Dr. Clark introduced the new president, Dr. Ralph Bohnsack, Brookfield, who immediately put his wife to work playing the piano while the group closed out the evening singing Christmas carols and other songs.

In addition to Dr. and Mrs. Summers, guests present were Dr. and Mrs. C. W. Pemberton, Mendon; Mr. Hugh Innis, Superintendent of the Chillicothe Hospital, and Mrs. Innis; Mr. Ray McIntyre, Mr. Sam Ross, who is retiring as representative of Squibb after many years of service in the area; Mr. Jack Magee, Pfizer Laboratories;

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Mr. Don Ganzer and Mr. Nelson Eberley, Merck Sharpe and Dohme; Mr. Pat Joyce, Abbott Laboratories; Mr. Howard Chlandee, Schering Corporation; and Mr. Harold Stevens of Merrill Company.

Frank R. Daley, M.D., *Secretary*

## FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Jefferson County Medical Society

The Jefferson County Medical Society met at Jefferson Memorial Hospital on December 5, 1961, with Drs. Senn, Yoskit, Allbee, Bolgar, Rutledge, McKinstry, Carron and Kozal present.

A small but interested group attended.

Mr. Philip E. Foley and Mr. Gerald D. Witzling gave a comprehensive report on the special problems facing Blue Shield, particularly in regard to industrial coverage. The basic problem is apparently one of full coverage vs. the present program as it now stands. Considerable discussion of the Michigan Blue Shield M-75 program and other full coverage plans took place. This was followed by a motion to ask Blue Shield to work out some form of coverage which would then be brought before the Medical Society for reconsideration. The motion was duly seconded and passed with Dr. Rutledge casting a dissenting vote.

It was moved and seconded that a check be sent to the Missouri State Medical Foundation as a Society contribution.

Election of officers was then held and Dr. Allbee was elected President; Dr. Mayfield, Vice President, and Dr. Kozal, Secretary-Treasurer. Dr. Kozal was elected delegate, and Dr. Yoskit alternate.

Mr. Ray McIntyre was present as a special guest and provided his usual exceptional assistance in keeping the discussion in its proper perspective.

The meeting closed with the usual refreshments provided by the hospital kitchen staff.

F. L. Kozal, M.D., *Secretary*

## EIGHTH DISTRICT

DOYLE C. McCRAW, BOLIVAR, COUNCILOR

### Jasper County Medical Society

Some 55 members and guests attended a meeting of the Jasper County Medical Society in the Drake Hotel at Carthage on Tuesday night, November 14. Those in attendance were privileged to hear a talk by L. F. Peltier, M.D., Chairman of the Department of Orthopedic Surgery at the University of Kansas School of Medicine. His talk, among other things, covered new aspects of fat embolism as seen in fractures and other injuries.

The Woman's Auxiliary, following dinner with the doctors, retired to a separate meeting where 28 of their members heard an address given by Dr. William Jackson Wilson, Pastor of the First Community Church in Joplin.

David Allen, M.D., *Secretary*

## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid Missouri County Medical Society

A dinner meeting of the Mid Missouri County Medical Society and the doctors' wives, was held Thursday night, November 16, at the Munger Moss Cafe in Lebanon.

The evening festivities began with a social hour followed by a turkey dinner and then the program.

The scientific presentation was given by Thomas Ashley, M.D., surgeon; Thomas Cochran, M.D., cardiologist, and Raymond Christy, M.D., pediatrician, of the Smith-Glynn-Callaway Clinic of Springfield.

These three physicians, comprising a cardiac panel, discussed a simplified method of open heart surgery and in addition showed a movie to supplement the discussion. This was a most interesting and informative program.

Those in attendance included physicians, their wives, and a number of surgical nurses. The total attendance numbered approximately 40 people.

George Fisher, M.D., of Lebanon, was named

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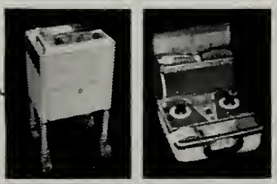

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President of the Society for 1962 with M. K. Underwood, M.D. of Rolla, continuing as Secretary-Treasurer.

### Meeting of December 13

The December meeting representing a combined meeting of the Society and the doctors' wives with the staff members of the Phelps County Memorial Hospital, and their wives, was held in the Pine Room of the Greyhound Bus Station in Rolla on Wednesday night, December 13. A social hour and dinner preceded an excellent scientific program on "Recent Advances in the Diagnosis and Management of Urinary Tract Infections in Children."

The subject was interestingly covered by three physicians from St. Louis, all members of the staff of Washington University Medical School. They were Richard M. Carlin, M.D., Department of Urology; William McAllister, M.D., Department of Radiology; and Maurice Lonsway Jr., M.D., Department of Pediatrics.

All present are indebted to these three physicians for an outstanding discussion of a timely and practical subject.

M. K. Underwood, M.D., *Secretary*

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## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Butler-Ripley-Wayne County Medical Society

The Butler-Ripley-Wayne County Medical Society met at the Hickory House on December 15, 1961, at 6:30 p.m. for a dinner meeting.

Dr. T. J. Cooper and Dr. V. P. Perna, pathologists of St. Louis, were guest speakers. The discussion of the proposed medical examiner's act for the State of Missouri was charted out along with the problems involved in the present coroner system.

Dr. Cooper set forth many things that practicing physicians should be aware of in sudden death. Dr. Perna set forth many points in his experience as Boone County Coroner and recommends that it is quite important that counties make every attempt to have a physician coroner available until such a time as a medical examiner's act can be passed. The program was extremely well accepted by those members present.

Following scientific discussion, the officials for next year were elected as follows: E. T. Hansbrough, President; Jim Turner, Vice President; John Wright, Secretary; B. M. McLain, Treasurer.

E. T. Hansbrough, M.D., *Secretary*

### Mineral Area County Medical Society

A meeting of the Mineral Area County Medical Society was held Thursday night, December 28, in the Clinic Building of the State Hospital at Farmington. The program for the evening was presented by the Medical Protective Company of Fort Wayne, Indiana. Mr. Ralph Borgemann, St. Louis, representative for Medical Protective, and Mr. David Colson, Attorney at Law, Farmington, discussed the subject, "Malpractice Claims."

Following the formal presentation of this timely subject, questions from the audience were received and discussed.

Paul Dennis, M.D., *Secretary*

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## MISSOURI STATE SURGICAL SOCIETY TO MEET AT TIME OF ANNUAL SESSION

The Missouri State Surgical Society will hold its fifth annual meeting on Monday evening, March 19, 1962. The meeting will be held at the Starlight Roof, Chase-Park Plaza Hotel, with a social hour at 6:30 p.m. followed by dinner at 7:00 p.m.

The distinguished guest speaker will be H. William Scott Jr., M.D., Professor and Chairman, Surgery Department, Vanderbilt University Hospital, Nashville, Tenn. His subject will be "An Appraisal of Vagotomy and Antral Resection in Surgical Treatment of Duodenal Ulcer."

Nonmembers of the Society interested in attending should contact Eugene M. Bricker, M.D., 100 N. Euclid Ave., St. Louis 8. Admission will be by reservation only.

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## MISSOURI STATE MEDICAL ASSOCIATION

### *104th Annual Session*

### Hotel Chase, St. Louis

### March 18, 19, 20, 21, 1962

#### Sunday, March 18, 1962

12:30 to 3:30 p.m. Registration. Hotel Chase Foyer.

1:30 p.m. House of Delegates. Chase Club.

3:30 p.m. Reference Committee meetings.

6:30 p.m. Committee on Diabetes and Missouri Diabetes Association Dinner. Hunt Room.

The Role of the Kidney in the Disposal of Insulin, Henry T. Ricketts, M.D., Chicago.

7:00 p.m. Dinner in Honor of Secretaries and Presidents of County Medical Societies and New Members. Khorassan Room. Entertainment sponsored by Woman's Auxiliary, St. Louis County Medical Society.

#### Monday, March 19, 1962

8:00 a.m. Registration. Hotel Chase Foyer.

9:00 a.m. Panel: What's New in Medicine, Surgery, Obstetrics, and Ear, Nose and Throat. Khorassan Room.
Moderator: C. Thorpe Ray, M.D., Columbia.
Panelists:
William F. Miller, M.D., Dallas
Denton A. Cooley, M.D., Houston, Texas.
Phil C. Schreier, M.D., Memphis, Tenn.
Joseph H. Ogura, M.D., St. Louis.

Many developments in otolaryngology have occurred in the last decade. In the ear, the nearly normal restoration of hearing by the stapes operation is well known. The ankylosed footplate is bypassed by either the polyethlene strut or a wire and the use of vein grafts has been a technical development that has decreased failure. Some progress has been made in eradicating the complications of chronic otitis media and a chance for restoring hearing in a selected group is offered. Simple perforations of the drum can be closed by vein grafts. The treatment of paralysed facial nerve by Bell's palsy has been highly successful by the decompression procedure. All these advances have been made possible by the development of micro-surgical technics. Within the last two years, the use of high frequency ultra sound destruction of the vestibular end of the 8th nerve offers promise for ridding the patient of dizziness in Meniere's disease.

In nasal surgery the advances have been only a few. The decompression operation for malignant exophthalmos has been eminently successful in restoring vision and cosmetic improvement. Combined approaches of the external nasal pyramid and septum have now been recognized to be a necessary part of nasal surgery in patients with nasal obstruction and external deformity. The technics that have been developed have been directed at obtaining the best functional and cosmetic result at one operation instead of the two stage procedure.

For the throat, there have been numerous advances. Experience has been gathered with the conservation surgery which effectively "cures" cancer in the supraglottic and pharyngeal areas previously treated by total laryngectomy. The functional result has been excellent in the swallowing and voice is good and the patient does not have a tracheostomy. This operation has been applied to other diseases which have been previously considered hopeless. Cases of severe lye burns of the larynx and esophagus can now be rehabilitated by a combined laryngologic and thoracic surgeon approach. The colon substitution to the pharynx has worked in a significant number of patients. In the area of trauma to the larynx it has been learned that the supraglottic structures may be removed and the pharynx repaired, indeed even with paralyzed cords, these patients can be rehabilitated without a tracheostomy. In the area of subglottic trauma, resection and end-end anastomosis of the second tracheal ring to the thyroid cartilage effectively rids the patient of a tracheostomy tube. Decompression procedures for unilateral idiopathic paralysis offers hope of restoring function.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Inborn Errors in Metabolism, David Yi-Yung Hsia, M.D., Chicago.

11:30 a.m. Some Recent Developments in Surgery of Acquired Heart Disease Including Valve Replacement, Denton A. Cooley, M.D., Houston, Texas.

The era of open heart surgery has increased the challenge for surgical treatment of acquired lesions of the heart. Although some valvular lesions are correctible by relatively simple technics not requiring an open heart, an increasing number of advanced valvular insufficiency and stenosis are being treated surgically. Moreover, efforts are being made to operate upon patients with multiple valve lesions. The need for prosthetic devices for replacement of hopelessly diseased valves is becoming increasingly evident.

During the last six years more than 1,300 operations using the pump oxygenator for temporary cardiopulmonary bypass have been performed. About 25 per cent of these operations were for acquired heart lesions. Various technics of valve replacement and repair have been used during this period and are being evaluated clinically and experimentally. The results of this experience will be presented along with other experiences in the treatment of acquired heart disease.

12:00 noon Committee on Maternal Welfare Luncheon. Regency Room.

12:00 noon. 50 Year Club Luncheon.

Medical Session. Khorassan Room.

2:00 p.m. Polyarteritis, John H. Talbott, M.D., Chicago.

The subject of polyarteritis, although not the commonest of the uncommon connective tissue diseases, appears to be increasing in incidence decade by decade. There is some experimental evidence to suggest hypersensitivity as an etiologic mechanism. In recent years, several cases of diffuse vasculitis have appeared which followed long term therapy with steroids. The diffuse manifestations of the disease affects vital structures including the kidney, the peripheral nervous system, and the heart.

Sponsored by the Missouri Society of Internal Medicine.

2:30 p.m. Diabetes Mellitus in the Elderly and Its Treatment with Hypoglycemic Agents, Henry T. Ricketts, M.D., Chicago.

A suspected diagnosis of diabetes must be confirmed by determination of the blood sugar, preferably two hours after an ordinary meal. Values above 140 mg. per cent (true glucose in venous blood) are diagnostic. Lower values are inconclusive and call for a glucose tolerance test. The test should be interpreted with the realization that many elderly, presumably nondiabetic, individuals have higher and/or later blood sugar peaks and a slower return to normal than do younger persons.

Diabetes with onset in middle or late life is typically mild and frequently can be controlled with diet alone. If, in patients 65 years of age or older, a proper diet results in freedom from glycosuria, two-hour postprandial blood sugar levels below 180 mg. per 100 ml., and maintenance of normal body weight, no further measures are necessary. Higher blood sugar values require administration of hypoglycemic agents.

Of the available oral agents, tolbutamide is the oldest and best. For most patients the dose is 0.5 gm. two to four times daily before meals, and never more then 3 gm. daily. It rarely causes hypoglycemia and side effects are infrequent and minimal. Chlorpropamide is more potent and lasts longer than tolbutamide, but serious hypoglycemic reactions have been reported, especially in the aged. The dose should not exceed 500 mg. given once daily before breakfast. Phenformin is effective in some cases but often produces gastrointestinal disturbance. It rarely causes hypoglycemia. The usual dose is 25 to 50 mg. two or three times daily with meals.

If oral agents do not keep the postprandial blood sugar below 180 mg. per 100 ml., they should be withdrawn and NPH or lente insulin given. The starting dose is 10 units daily 30 minutes before breakfast. This can be increased by 5 units each week until satisfactory control has been achieved.

Sponsored by the Missouri Diabetes Association.

3:00 p.m. Management of Pulmonary Emphysema, William F. Miller, M.D., Dallas, Texas

Surgical Session. Lido Room.

2:00 p.m. Diagnosis and Treatment of Cushing's Syndrome, H. William Scott Jr., Nashville, Tenn.

Thirty patients with Cushing's syndrome treated at the Vanderbilt University Medical Center during the last decade are reported. Recent advances in the study of adrenocortical function have resulted in a more accurate and precise approach to the diagnosis and treatment of Cushing's syndrome. Through the use of special adrenal stimulation and suppression tests, it is possible to predict correctly whether the cause of excessive hydrocortisone production is due to adrenal hyperplasia, adenoma or carcinoma with a great degree of accuracy. These special studies of adrenocortical function have proven equally valuable in ruling out the diagnosis in some 65 patients suspected of having Cushing's syndrome. Total bilateral adrenalectomy has come to be the surgical treatment of choice in Cushing's syndrome secondary to hyperplasia; this, too, is largely due to the knowledge gained through surgical experience in conjunction with special adrenocortical function studies during the last decade.

Of the 30 patients with Cushing's syndrome in the present study there are 24 cases of adrenal hyperplasia, four cases of adrenal carcinoma, and two cases of adrenal adenoma. A detailed analysis of the results of diagnostic studies and surgical treatment will be presented.

Sponsored by the Missouri State Surgical Society.

2:30 p.m. Title to be announced. Dwight E. Harken, M.D., Boston, Mass.
Sponsored by the Missouri Heart Association.

3:00 p.m. Surgical Treatment in the Presence of Pulmonary Hypertension in Cardiac and Pulmonary Disorders, Peter V. Moulder, M.D., Chicago.
Sponsored by the Missouri Chapter, American College of Chest Physicians.

3:30 p.m. Intermission to View Exhibits.

4:00 p.m. House of Delegates. Regency Room.

4:45 p.m. Reference Committee meetings.

6:30 p.m. Missouri Society of Internal Medicine Dinner. Lido Room.

6:30 p.m. Missouri State Surgical Society Dinner.

### Tuesday, March 20, 1962

8:00 a.m. Registration, Hotel Chase Foyer.

9:00 a.m. Panel: Recent Developments in Infectious Disease. Khorassan Room.
Moderator: Carl V. Moore, M.D., St. Louis.
Panelists:
Viruses, Common Colds and Cancer, Robert J. Huebner, M.D., Bethesda, Md.

Both colds and cancers are traditionally regarded as cryptic entities almost transcending normal biologic concepts and requiring national foundations and "categorical" approaches for their eventual solution. Holy crusades to find the causes of these illnesses have invoked hypotheses from every source except the Delphic oracle and Macbeth's witches' cauldron; strange and often wonderful, they have furnished many interesting answers, but no real solutions for either colds or cancers.

It now appears that viruses cause not only colds, but also certain cancers. To this extent they are simply infectious diseases, definable biologic entities

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STUDY 3 *Weissberg, G.: Clin. Med. 7:1161, 1960.*

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subject to methods of inquiry as straightforward as those of conventional microbiology and as promising as those of modern virology.

Recent Developments in Mycotic Disease, Michael L. Furcolow, M.D., Kansas City, Kan.

Since he lives in the center of the histoplasmosis area, the Missouri physician should keep abreast of the developments in histoplasmosis. The most important recent development is the demonstration of the seriousness and prevalence of the chronic cavitary type. This disease is commonly mistaken for tuberculosis. Increasing recognition of the importance of fungus diseases to the general practitioner will be stressed, including histoplasmosis and blastomycosis. Diagnostic and therapeutic measures for the fungus diseases will be discussed.

The Molecular Trend in Medical Bacteriology, W. Barry Wood, M.D., Baltimore, Md.

Like modern biology in general, medical bacteriology has "gone molecular." Examples of this trend will be cited which relate to the following topics: bacterial structure, bacterial metabolism, virulence, defense mechanisms of the host and antibacterial therapy.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Surgical Emergencies in the Neonatal Period, J. Eugene Lewis, M.D., St. Louis.

The more common thoracic and gastrointestinal problems of the newborn period are presented. This will include diaphragmatic hernia, esophageal atresia, pneumothorax and congenital intestinal obstruction. Sixty per cent of the deaths in this group is due to failure to make a prompt or accurate diagnosis; 25 per cent is due to technical errors or lack of surgical judgment. Diagnosis and management will be emphasized. The presentation will be illustrated.

12:00 noon. University of Missouri Medical Alumni Association Luncheon. Zodiac Room.

2:00 p.m. Office Psychiatry for the Nonpsychiatrist, Jackson A. Smith, M.D., Chicago.

The physician who is not a psychiatrist is repeatedly confronted by two types of psychiatric problems in office practice, namely, the patient who has an illness which is primarily emotional and, more frequently, the individual whose physical symptoms are aggravated or distorted by mental (emotional) forces.

This paper is concerned with the recognition of these two types of patients and their management in the office.

2:30 p.m. Cutaneous Manifestations of Systemic Disease, Adolph Rostenberg, M.D. Chicago.

The importance of the skin in physiological, biochemical, and immunological mechanisms will be discussed briefly. The emphasis of the talk, however, will be on the role of the skin as an indicator of internal disease. A variety of conditions, including lupus erythematosus, dermatomyositis, necrobiosis lipoidica diabeticorum, pseudoxanthoma elasticum, xanthomatosis, will be shown to indicate how the skin lesions enable one to assess what is going on inside. Various skin tumors will be shown, again to emphasize that the diagnosis of more serious difficulties can often be made by looking at the skin.

3:00 p.m. Intermission to View Exhibits.

3:30 p.m. Panel: The Handicapped Child in Missouri. Khorassan Room.
Moderator: C. Arden Miller, M.D., Kansas City, Kan.
Panelists:
Carl J. Marienfeld, M.D., Columbia.

Beginning in 1912, the National Development of Handicapped Children's Programs have proceeded along the general guide lines established by the Children's Bureau. In their words, the handicapped child is served best when he is treated first as a child, then as a handicapped child and, finally, as a child with a particular handicap.

In Missouri this program began in 1927. Here as in most states, because of the realistic budgetary and organizational limitations, the program began with its focus upon the latter or particular handicap which was orthopedic in nature.

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This continued with gradual expansion of treatment centers, and admission to the service was possible only through the county court, which was charged with the determination of financial eligibility.

The recent change in the State Crippled Children's law in 1959, with a broader definition of crippling conditions and the elimination of the county court procedure has enabled a gradual increase in numbers of children served, services given and categories of physicians giving these diagnostic and consultative services in the treatment centers.

The Crippled Children's Service function is only that of enabling these services if they are not otherwise available, and if these services are requested by the patient and the referring physician, who remains the child's doctor. The associate physicians of the Crippled Children's Service, the contracting treatment centers, and the central staff are in only a consultative and diagnostic relationship with the patient. Their work is conducted through and with the help of the referring physician in each case.

Administratively the Board of Curators of the University of Missouri conduct this state program.

Frank B. Wilson, Ph.D., Brentwood.
A. R. Sharp, M.D., St. Louis.
D. Elliott O'Reilly, M.D., St. Louis.
Benjamin Milder, M.D., St. Louis.
L. Wayne Hart, M.D., Kansas City, Kan.

3:30 p.m. Panel: Obstetric Hemorrhage and Shock. Lido Room.
Moderator: R. Gordon Douglas, M.D., New York.
Recognition and Prophylaxis of Obstetric Hemorrhage and Shock, A. C. Trueblood, M.D., St. Louis.
Use of Drugs in Obstetric Hemorrhage and Shock, Eugene G. Hamilton, M.D., St. Louis.

The ideal treatment for hemorrhagic shock is stopping bleeding and immediate blood replacement. However, it sometimes occurs that for a number of reasons there is delay in instituting one or the other modalities of treatment. In cases where blood replacement cannot be immediately done, certain pharmacologic agents have been brought to bear on the problem.

This discussion deals with the harmful effects of pressor substances and the beneficial effects of Cortisone, and ganglionic blocking agents. There are still unknown quantities relative to dosage and timing.

Use of Fluids and Blood Transfusion in Obstetric Hemorrhage, Seymour Monat, M.D., St. Louis.
Surgical Procedures Used in the Treatment of Obstetric Hemorrhage and Shock, Carl Dryer, M.S., St. Louis.
Sponsored by the St. Louis Gynecological Society.

7:30 p.m. Annual Banquet in Honor of Past Presidents. Khorassan Room.
Edward R. Annis, M.D., Miami, Fla., Speaker.

Wednesday, March 21, 1962

7:30 a.m. Registration. Hotel Chase Foyer.

7:30 a.m. House of Delegates Breakfast Meeting. Chase Club.

9:00 a.m. Intermission to View Exhibits.

9:30 a.m. Medico-Economics Session. Khorassan Room.

11:00 a.m. Adjournment.

## THE MISSOURI SOCIETY OF MEDICAL TECHNOLOGISTS

*Fifteenth Annual Convention*
St. Louis, Missouri
March 18, 19, 20, 21, 1962

### TIME AND PLACE OF MEETINGS

Sunday, March 18

10:00 a.m. Board of Directors Meeting.
1:30 p.m. Registration, Wohl Dining Room, Barnes Hospital.
2:00 p.m. Business Meeting, Missouri Society of Medical Technologists, Wohl Dining Room, Barnes Hospital.
6:30 p.m. Buffet Supper, Wohl Dining Room.

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8:00 p.m. Business Meeting, Missouri Association of Blood Banks, Wohl Dining Room.

**Monday, March 19**

8:00 a.m. Registration, Chase-Park Plaza Hotel, Stockholm Room.
9:00 a.m. Scientific Session, Presented by the Missouri Association of Blood Banks, Stockholm Room.
12:00 noon. Lunch.
2:00 p.m. Scientific Session, Stockholm Room.
3:30 p.m. Continuation of Business Meeting of MSMT to discuss Licensure or Alternate Plan, Stockholm Room.
7:30 p.m Banquet Sponsored by the Missouri Society of Clinical Pathologists for Members of MSMT at Cheshire Inn, 7036 Clayton Road.

**Tuesday, March 20**

8:00 a.m. Registration, Chase-Park Plaza Hotel, Stockholm Room.
9:00 a.m. Scientific Session, Stockholm Room.
12:00 noon. Lunch.
1:00 p.m. Workshop: Spectrophotometry, Wohl Dining Room, Barnes Hospital.

**Wednesday, March 21**

8:00 a.m. Registration, Chase-Park Plaza Hotel, Stockholm Room.
9:00 a.m. Scientific Session, Stockholm Room
12:00 noon. Adjournment.

## SCIENTIFIC SESSION

Chase-Park Plaza Hotel, Stockholm Room

**Monday, March 19, 1962**

8:00 a.m. Registration.
9:00 a.m. Invocation, Reverend Ernest W. Luehrman, Chaplain, Deaconess Hospital, St. Louis.
9:00 a.m. Presented by the Missouri Association of Blood Banks: Scientific Papers.
10:00 a.m. Coffee Break.
10:15 a.m. Visit Exhibits.
10:30 a.m. Panel Discussion on the Roll of the Blood Bank Facility in the Community.
12:00 noon. Lunch.
2:00 p.m. A Symposium on Licensure, Angelo Lapi, M.D., Pathologist, St. Mary's Hospital, Kansas City, Mo., and Audrey Wines, M.T. (ASCP), Clinical Pathological Laboratory, St. Louis.
3:15 p.m. Coffee Break.
3:30 p.m. Continuation of MSMT Business Meeting to discuss Licensure or Alternate Plan.

**Tuesday, March 20, 1962**

8:00 a.m. Registration.
9:00 a.m. Serum Protein Electrophoresis, Fredric Loose, Clinical Laboratories, St. Louis.
10:30 a.m. Coffee Break.
10:45 a.m. Gas Chromatography, G. E. Gantner, M.D., Department of Pathology, St. Louis University.
11:15 a.m. The Use of the Refractometer for Urine Specific Gravity, Eugene Tucker, M.D, Department of Pathology, St. Louis University.
12:00 noon. Lunch.
1:00 p.m Workshop: Spectrophometry, Vincent P. Perna, M.D., Pathologist, Clinical Laboratories, St. Louis, Wohl Dining Room, Barnes Hospital.

**Wednesday, March 21, 1962**

8:00 a.m. Registration.
9:00 a.m. The Use of the Fluorescent Antibody Technic in the Identification of Streptococci, G. C. and Syphilis, Nicholas D. Duffet, Ph.D., Director of Public Health Laboratories, St. Louis.
10:00 a.m Coffee Break.
10:15 a.m. Fluorescent Technics in the Diagnosis of Rabies, Raymond F. Gray, Ph.D., Bacteriologist, Clinical Laboratories, St. Louis.
11:00 a.m. Subject: Title to be announced later. Thomas J. Cooper, M.D., Pathologist, Clinical Laboratories, St. Louis.

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Bibliography: 1. Cohen, A., et al.: J.A.M.A. 165:225, 1957. 2. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 3. Moravec, C. L. and Moravec, M. E.: Clin. Med. 7:2322, 1960. H-416

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# The Council

The Council met at Hotel Chase, St. Louis, December 2, 3, 1961, with Kenneth C. Hollweg, M.D., Kansas City, Chairman, presiding. Those present were Drs. Hollweg; J. H. Summers, Lebanon; Donald M. Dowell, Chillicothe; John I. Matthews, Jefferson City; Charles R Doyle, St. Louis; Joseph L. Fisher, St. Joseph; A. P. Rowlette, Moberly; Leonard T. Furlow, St. Louis; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Doyle C. McCraw, Bolivar, E. A. Stricker, St. James; W. D. English, Cardwell; H. M. Hardwicke, Jefferson City; Messrs. John R. Buckner, Springfield; Edgar Mothershead, St. Louis; Hollister Smith, St. Louis; Lemoine Skinner, Jordan Singleton, Gene Lunn, Ray McIntyre, T. R. O'Brien, Thomas Fox, and Miss Helen Penn, St. Louis; Frank Woolley, Chicago. Attending part of the meeting were Drs. Vernon E. Wilson, Columbia; Florence MacInnis, Kansas City; Ray Williams, St. Louis.

### RIBICOFF HEARING

Mr. O'Brien reported on the Ribicoff hearing held in St. Louis and said that from the standpoint of medicine, the meeting went well and that publicity in the newspapers was good.

### H.R. 24

Mr. O'Brien reported that the Legislature had set up a committee to study the problems of aging in the state and this committee had had three hearings. He said that he requested permission for an Association witness to appear after the meeting of the House of Delegates next spring.

### MCNAMARA HEARINGS

Mr. O'Brien outlined the preparation that had been made for the six McNamara hearings that will be held during the early part of December in Missouri.

### MEETINGS

Mr. McIntyre reported on several meetings that had been held recently, including one at Moberly where lay guests were present at which Mr. James Foristel of the A.M.A. Washington office had been the speaker; a meeting at Cape Girardeau when Mr. Foristel talked to the Rotary Club with a number of doctors present, and a meeting at Hannibal at which Mr. Woolley of the A.M.A. was the speaker. He said that Dr. Summers spoke at the Cape Medical Society meeting, November 6, and was scheduled to speak at the Grand River Medical Society on December 14.

### PRECEPTORSHIP PROGRAM

Mr. McIntyre announced that five perceptees are with physicians in the state at present and that three would be going out on December 3. He said that many preceptors continued in the work but that more would be needed as the program grew.

### MISSOURI STATE MEDICAL FOUNDATION

The following report on the Missouri State Medical Foundation was presented: Total number of students who have received loans, 66; total number who have received loans for two school years, 16; number of seniors in 1960-1961 who have received loans, 28. The loans have gone to 58 students at the University of Missouri, five at St. Louis University, one at Washington University, one at Albert Einstein University and one at MeHarry University. It was reported that one was pending for Tulane University. Receipts to date were given as $51,700 (including three contributions in addition to that made available by the Association), total loans to date $44,430.00, leaving $7,270.00 in the fund. Dean Wilson said that from $20,000.00 to $25,000.00 in loans to medical students would be needed from some source during the rest of this school year.

### EYE HEALTH

The report of the Committee on Eye Health was presented as follows:

Committee on Eye Health
Missouri Hotel—Jefferson City
November 19, 1961

Presiding: John McLeod, M.D., Kansas City, Chairman.

Present: Drs. McLeod; Michael F. Pernoud, St. Louis; H. B. Stauffer, Jefferson City; Paul G. Wolff, Cape Girardeau; Dick H. Underwood, Kansas City; D. E. Eggleston, Macon; and W. L. Post, Joplin.

Absent: Drs. H. B. Ivy, Springfield; Paul M. Beck, St. Joseph; Robert S. Minton, St. Joseph; and Vernon G. Jackson, Fulton.

Others Present: Drs. Buesscler, Schwartz and Russell of the University of Missouri School of Medicine; T. E. Sanders and Robert Dean Mattis, St. Louis; Mr. T. R. O'Brien, St. Louis.

Eye Bank: A letter received from the Dean of the University of Missouri School of Medicine regarding eye banks was referred to the Committee by the Council.

The Committee obtained information from the American Academy of Ophthalmology and Otolaryngology regarding eye banks, including a Code of Ethics prepared by the Academy.

In October 1961, the Eye Bank Association of America (a federation of eye banks) was formed and uniform standards and procedures, including a code of ethics, were adopted. The Committee on Eye Banks of the American Academy of Ophthalmology and Otolaryngology will serve as an advisory committee to the Eye Bank Association.

The Committee on Eye Health recommends that the Missouri State Medical Association should support and endorse the formation of eye banks in our state, wherever and whenever need is demonstrated so long as such eye banks conform with the qualifications and code of ethics required by the Eye Bank Association of America.

At the present time, two eye banks are in operation in Missouri which meet the standards referred to. These are the Eye Bank of St. Louis, located at the Washington University School of Medicine, and the Eye Bank at the University of Missouri School of Medicine, Columbia.

Optometry: Optometric legislation was discussed.

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Fat: 0
calories 104/8 oz. glass
(Average of American Beers)

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It was pointed out that the code of ethics concerning eye banks was still changing and it was pointed out that the Committee on Eye Health is aware of this, and is not requesting that the code be approved at this time, and on motion of Dr. Dowell, duly seconded, the report was accepted.

### MEDICAL ECONOMICS

The report of the Committee on Medical Economics was presented as follows:

Committee on Medical Economics
Coronado Hotel, St. Louis
October 22, 1961

Presiding: G. W. Winn, M.D., Boonville, Chairman.

Present: Drs. Winn; John R. Forgrave, St. Joseph; Byron E. Watts, Jefferson City; George L. Hawkins, St. Louis; E. T. Hansbrough, Poplar Bluff; Rae W. Froelich, Lebanon; Messrs. Lemoine Skinner, Jordan Singleton, Gene Lunn, Tom P. Fox, Tom R. O'Brien, and Miss Helen Penn, St. Louis.

Absent: Drs. Martin Hunter, Kansas City; Kenneth E. Knabb, Springfield.

Kerr-Mills: The situation on the Kerr-Mills implementation in Missouri was reviewed. The joint report of the Committees on Aging and Medical Economics, as amended by the House of Delegates in March 1961, resulted in the adoption of the resolution "Be it resolved, That the House of Delegates endorse the principles of the Kerr-Mills act and recommend that the act be fully implemented by the Legislature of Missouri to such degree as may appear necessary and in the order of need."

H.B. 690, providing for full implementation of Kerr-Mills for "needy" and "near needy" was introduced on April 4, 1961. The Committee on Public Health of the House held several hearings on H.B. 690, and on H.B. 633, a bill with similar objectives. The estimated cost of the bill, state funds only, ranged from 107 million for the biennium for complete and total implementation, down to 5½ million for minimum implementation only.

Because of the confusion regarding costs of implementing Kerr-Mills, the Assembly adopted H.R. 24, calling for an interim study committee. The Committee, composed of five House members and five Senate members, is chaired by Senator William D. Cason.

Two hearings of this special committee have been held, with a third scheduled for November 3. At that time, the Director of Welfare, Mr. Proctor Carter is scheduled to make his recommendations to the Committee. It appears that the Committee will continue to hold hearings during 1962, probably will not complete its report until late 1962, and actions taken by M.S.M.A. House of Delegates in March, 1962, can be submitted after that time.

### VENDOR PROGRAM

Actually, the original "vendor" program was superseded by Kerr-Mills, which contains two parts. In Missouri, Kerr-Mills is limited at present to hospitalization and nursing home or home care for the recipients of old age assistance, the so-called, "needy." This care is provided on the basis of the following definitions: "Benefit payment may be made on behalf of recipients of public assistance for the purpose of providing in-patient hospital care to persons requiring hospitalization for medical emergencies or acute serious illness" and "benefit may be made on behalf of a person who is completely bedfast and totally disabled, provided, however, the total monthly payment on behalf of such recipient shall not exceed $100.00."

When the law went into effect the Legislature appropriated $1 million plus $1½ million from the Federal government for the biennium. Under this plan, the hospitals were originally paid $5.00 per diem, later $10.00 and since January, 1961 were paid on a per diem cost, however in the last month of the 1961 fiscal year, June, this was reduced to 75 per cent of cost. There is now approximately $5½ million federal and state money for the present biennium, which is expected to be sufficient to pay hospitals their costs for 14 days of care per year.

Suggestion Reported: A suggestion proposed by a person connected with Blue Cross was reported: That a loan agency, either state or federal, or combination, be established for persons over 65 where such persons may borrow money to meet incurred health expenses not recovered from insurance, etc., with no interest to be charged, but chargeable to their estate if the loan is not paid.

Pay to Physicians: Members of the Committee who were present agreed that physicians should not receive money directly from any state or federal aid program for the indigent, but that physicians should charge fees even though patient is unable to pay.

Action: It was decided that more information was needed before the Committee could take definite action and it was requested that information be obtained as to the cost of *adding:* 1. drugs for those now eligible for care; 2. out patient diagnostic service for those presently eligible; 3. of expanding the present program to include the "near needy" on same basis as present law.

It was decided that a meeting of the Committee on Medical Economics would be held early in December at which time a definite report and action could be determined.

On motion of Dr. Whitener, duly seconded, the report was accepted.

### CIVIL DEFENSE DISASTER MEDICAL CARE

Mr. Fox presented the report of the Committee on Civil Defense Disaster Medical Care as follows:

Committee on Civil Defense Disaster Medical Care
Missouri Hotel, Jefferson City
November 19, 1961

Presiding: Carl D. Siegel, M.D., Sedalia, Chairman.

Present: Drs. Siegel; H. B. Steinbeck, Union; Carroll P. Hungate, Kansas City; John L. Mothershead, St. Joseph; George L. Watkins, Farmington; W. C. Allen, Jefferson City; Messrs. Jordan Singleton and Thomas P. Fox, and Miss Helen Penn, St. Louis.

Absent: Drs. M. P. Leech, Fayette; John H. Walterscheid, Hannibal; Curtis H. Lohr, Clayton; R. Ned White, Springfield; George E. Thoma, St. Louis; O. P. Hampton, University City.

Minutes: Minutes of the meeting of November 20, 1960, were discussed and it was pointed out that the Governor's Civil Defense Advisory Committee, recommended by this Committee, had held one meeting and will soon hold an organizational meeting. The half-day meeting on Civil Defense just prior to the 1961 Annual

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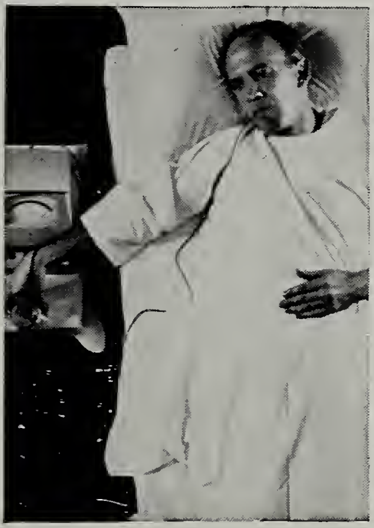
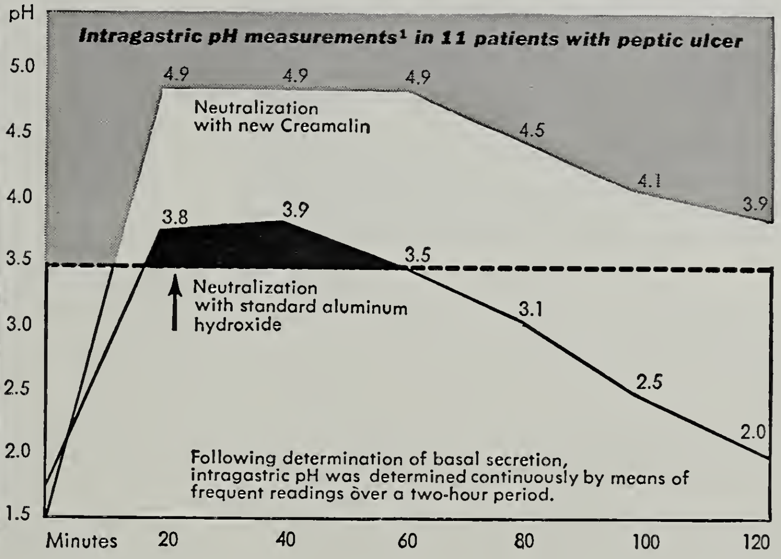
*faster —*
*twice as long at*
*pH 3.5 or above*




Intragastric pH measurements[1] in 11 patients with peptic ulcer
pH
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
Minutes 20 40 60 80 100 120
4.9 4.9 4.9 4.5 4.1 3.9
Neutralization with new Creamalin
3.8 3.9 3.5 3.1 2.5 2.0
Neutralization with standard aluminum hydroxide
Following determination of basal secretion, intragastric pH was determined continuously by means of frequent readings over a two-hour period.

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*How Supplied:* Creamalin Tablets, bottles of 50, 100, 200 and 1000. Also available: New Creamalin Liquid (1 teaspoon = 1 tablet), bottles of 8 and 16 fl. oz.

*References:* **1.** Schwartz, I. R.: *Current Therap. Res.* 3:29, Feb., 1961. **2.** Beekman, S. M.: *J. Am. Pharm. A.* (Scient. Ed.) 49:191, April, 1960. **3.** Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A.* (Scient. Ed.) 48:381, July, 1959. **4.** Data in the files of the Department of Medical Research, Winthrop Laboratories. **5.** Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A.* (Scient. Ed.) 48:384, July, 1959.

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Session was not held because of lack of time for preparation. The Council had voted to take up expenses as they occurred rather than budgeting a definite amount for the Committee; that the model hospital was displayed at the last Annual Session. The meeting suggested to formulate a uniform medical Civil Defense plan was being started by the Division of Health; and that the contact with other professional groups suggested by the Committee was being carried out by the Division of Health.

Battle Creek Meeting: Dr. Siegel told of a meeting to be held in Battle Creek from December 4 to 7, at which there will be representatives from Civil Defense, medical societies, health divisions and education departments. He said that a medical self help kit would be explained and the plan was that this information be disseminated to the general populus. He said the course was to take up where the Red Cross first aid work left off. Dr. Siegel said that he would attend the meeting.

Denver Meeting: Dr. Siegel reported on a Civil Defense Institute which he attended in Denver on September 16. He said that various states reported on their work and that the over-all planning in Missouri was in line with other states. He said that some states had begun stockpiling of drugs and other supplies and suggested that Missouri begin such work. He said there are now 68 Civil Defense hospitals in the state, some of them stored where there is insufficient personnel for manning.

Civil Defense Conference: Dr. Siegel reported attending the 12th County Conference Annual AMA Civil Defense Conference in Chicago on November 4 and 5. He said it was a practical meeting and that a report of the meeting will be published in J.A.M.A. later. He pointed out that the Division of Health was responsible for a state medical survival plan and that a framework had been set up but that personnel was lacking. He suggested that the Missouri State Medical Association might restate assuming responsibility of furnishing medical care in survival work.

Action: On motion of Dr. Hungate, seconded by Dr. Watkins, it was voted that it be recommended to the Council that Missouri physicians assume the responsibility of medical care in natural or wartime disasters, under the framework of the Division of Health.

Advisory Committee: The Governor's Advisory Committee was discussed and it was pointed out that recommendations must go through the Governor, and that medical members of the Committee must be guided by the M.S.M.A. Committee.

Lay Personnel: It was reported that in some states, the phrasing of the Civil Defense law was such that malpractice could not enter into the training of lay personnel for Civil Defense work. It was decided that this should be checked further and that possible changes in the Missouri law might be recommended. Dr. Siegel will inquire further in Battle Creek, December 5.

Discussion: The recommendation of shelters, the need to promote immunization prior to disaster, the need to allay public panic without incurring apathy, need for publicity on the self help program, the need for a manpower inventory and information on pharmacy inventories, the need for stockpiling of chemicals for purification of water and other public health measures were discussed.

Los Angeles Conference: Dr. Watkins reported briefly on the Civil Defense Program in Los Angeles in November, saying the highlights were a talk on possibilities of attack and survival, Pfizer awards for Civil Defense work, report of hearing of the Hollifield committee, the wide range of radiation discussions. He said that bacterial and chemical warfare was not discussed as it had been covered in other conferences. It was asked that the Hollifield committee hearings be obtained and furnished members.

Vote of Thanks: On motion of Dr. Hungate, seconded by Dr. Watkins, it was voted to express thanks to the Council and to the Division of Health for the support the Committee had continuously received.

Civil Defense Meeting at M.U.: Dr. Siegel said that he would confer soon with Dean Wilson of the University of Missouri School of Medicine concerning a postgraduate educational meeting on Civil Defense, similar to the one held on April 6, 1961, and attempt to have this an annual conference.

Role of Physician: It was pointed out that the role of the physician in Civil Defense was set out in an AMA manual.

After discussion, on motion of Dr. Dowell, it was voted that the report be accepted but that in lieu of "Action" on page 35, that the Committee be requested to work with Dr. Hardwicke on a program of medical care aspects to be presented to the Council as early as possible.

### TREASURER'S REPORT

Dr. Doyle presented the Treasurer's report, which on his motion, duly seconded, was approved.

### BUDGET

Dr. Doyle presented the report of the Budget committee as follows:

| | |
|---|---|
| Salaries | $ 62,840.00 |
| Office Rent & Light | 4,700.00 |
| Postage | 4,000.00 |
| Prg. Staty. & Supplies | 4,500.00 |
| Journal Expense | 41,500.00 |
| Telephone & Telegraph | 3,000.00 |
| Ins. Emp. Retire Plan | 7,187.00 |
| Professional Fees | 4,000.00 |
| Taxes Payroll | 2,000.00 |
| Travel Expense | 7,000.00 |
| Committees—Expenses | 53,550.00 |
| Furniture & Fixtures | 1,000.00 |
| General Expenses | 3,000.00 |
| Total | $198,077.00 |

After discussion of the deficit budget which the Committe had reported, on motion of Dr. Doyle, duly seconded, it was voted to recommend to the House of Delegates that dues be raised by $15.00 making a total of $50.00 retroactive to January 1, 1962, and that one half of the increase be allotted to the medical student loan fund, Missouri State Medical Foundation.

### FOUNDATION

On motion of Dr. Doyle, duly seconded, it was voted to transfer $25,000.00 from the general fund to the Missouri State Medical Foundation.

Dr. Wilson complimented the Council and the Association for its interest in medical education. He said that there were twice as many applicants for the medical school this year as there were last year, showing the in-

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WANTED—RESIDENTS IN PULMONARY DISEASES for July 1, 1962 in a 600 bed hospital in the Ozarks; fully approved; excellent facilities; research and teaching program; generous salary. Write: Charles A. Brasher, M.D., Superintendent and Medical Director, Missouri State Sanatorium, Mt. Vernon, Missouri. Applicant must be in possession of E.C.F.M.G. or a Provisional Certificate.

WANTED—Young Gentile general practitioner as an associate in a well-established practice. Plans for partnership agreement when mutually desired. Salary open. Further details upon request. Write, Box 265, c/o Missouri State Medical Association, 623 Missouri Theatre Building, St. Louis 3, Missouri.

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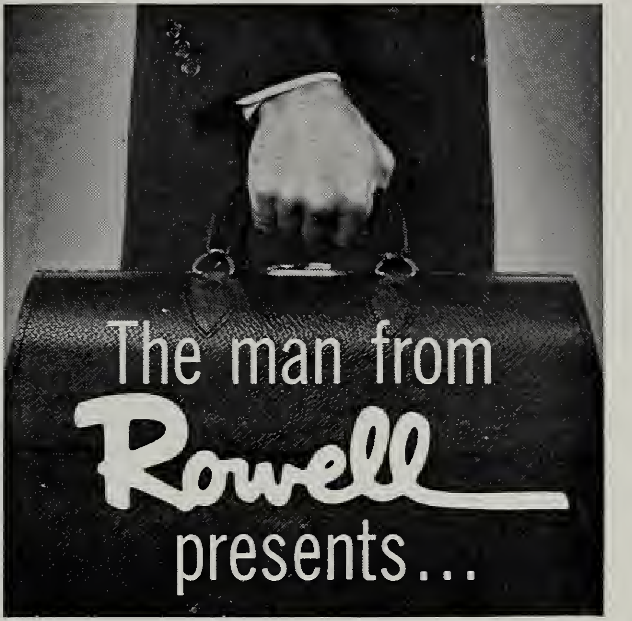
SITUATION WANTED—Bookkeeper-Typist; all phases of accounting including financial statements and tax reports. Call JEfferson 1-1225, Ext. 206.

WANTED—Associate in General Practice in a two-man Modern Clinic Building. Town of about 7,000 in Missouri Ozarks. Modern hospital available. Contact Rollin H. Smith, M.D., West Plains, Missouri.



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*Plus* 100 mg. Vitamin C to promote added resistance to infection.

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creased interest in M.U. Medical School by both physicians and lay people who are influencing more and more students to apply for admission to the medical school.

### POSTGRADUATE PROGRAMS

Dr. Wilson said that the University of Missouri School of Medicine wished to continue and promote its postgraduate education and wanted to plan sessions a year in advance. He asked that a Committee of the Association work with the University in this planning and the Chairman asked the Committee on Scientific and Postgraduate Work to serve in this capacity.

### EDITOR

Dr. Doyle moved that he be relieved as Editor of Missouri Medicine and that Dr. Joseph V. Finnegan, St. Louis, be appointed in his place. On motion of Dr. Furlow, duly seconded, Dr. Doyle's resignation was accepted with regrets and Dr. Finnegan was appointed Editor.

### GROUP CORPORATION LAWS

Medical Group corporation laws (Kintner type legislation) were discussed by Mr. O'Brien, Dr. Wilson, Dr. Furlow, Dr. Rowlette and Dr. Ray D. Williams. It was stated that three applications for corporate charters have been submitted by Missouri doctors to the Secretary of State. The Attorney General has been asked for an opinion. Following discussion the Chairman referred the matter to the Committee on Corporate Practice for further clarification.

### COMMITTEE ON AGING

The report of the Committee on Aging was presented as follows:

Committee on Aging
Coronado Hotel, St. Louis
October 15, and November 12, 1961

#### *October 15, 1961*

Presiding: Stanley S. Peterson, M.D., Springfield, Chairman.

Present: Drs. Peterson; Ralph Perry and John A. Griffith, Kansas City; C. Thorpe Ray, Columbia; Robert C. Kingsland, Clayton; Robert H. Tanner, Jefferson City; R. O. Muether, St. Louis; J. H. Summers, Lebanon; Messrs. John Buckner, Springfield; Jordan Singleton, Lemoine Skinner, Gene Lunn, Thomas Fox, Ray McIntyre, T. R. O'Brien, and Miss Helen Penn, St. Louis.

Subcommittee on Income Maintenance: The hearings to be held in Missouri by the U. S. Senate Subcommittee on Income Maintenance were discussed. The schedule was given as:

Kansas City, December 6—"Federal and State Activity."
St. Louis, December 8—"Housing for the Elderly."
St. Joseph, December 11—"Retirement Income."
Springfield, December 12—"Nursing Homes."
Hannibal, December 13—"Retirement Income."
Cape Girardeau, Dec. 15—"Retirement Income."

Senator Ewdard V. Long will chairman the meetings and he has said that the morning sessions will probably be held to the subject assigned the specific conference, but that other subjects connected with problems of aging may be brought up in the afternoon sessions.

In discussion, it was brought out that representatives should be available at the conferences, even if time did not permit all to speak, that definite information and definite figures should be available to all who will appear.

Letter: A proposed letter to presidents of county societies in which hearings are scheduled was presented. On motion of Dr. Perry, seconded by Dr. Ray, the letter and the general plans were voted approval.

Meeting on November 12: It was decided that a meeting of all those who would be concerned with the hearings should be held for further discussion and it was decided to meet in St. Louis on November 12.

Publicity: The handling of publicity on the conferences was discussed and several means were suggested by Mr. Singleton. He and Mr. Skinner were asked to have costs available at the November 12 meeting.

#### *Meeting on November 12, 1961*

Present: Drs. Stanley S. Peterson, Springfield, Chairman; R. O. Muether, St. Louis; John A. Griffith and Ralph Perry, Kansas City; Robert C. Kingsland, Clayton; C. Thorpe Ray, Columbia, members of the Committee. In addition, the following attended the meeting: Drs. Richard M. Strong, Daniel B. Landau, Lysle M. Bach, Henry H. Sweets, Jr., Hannibal; J. S. Summers, Lebanon; Raymond A. Ritter, S. S. Barnes, Cape Girardeau; John R. Forgrave, Judson M. Hughes, St. Joseph; W. M. Kitchen, Kansas City; Don C. Weir, A. M. Repetto, St. Louis; Messrs. John R. Buckner, Springfield; Edward M. Hirsch, St. Joseph; Edgar Mothershead, St. Louis County; Hollister Smith, St. Louis; Frank Woolley, Chicago; Thomas P. Fox, Ray McIntyre, T. R. O'Brien, Lemoine Skinner, Jordan Singleton, Gene Lunn, St. Louis.

Purpose: Dr. Peterson pointed out that the purpose of the meeting was to make further plans on the conferences to be held in the state by the Subcommittee of the Senate Subcommittee on Income Maintenance (McNamara Committee on Aging).

Fact Sheets: Fact sheets were presented on "National Health Care Data," "Missouri Over-65 Population Characteristics," "Prepaid Health Insurance Data," "Missouri Nursing Home Data," "Missouri Hospitals," "Missouri Vendor Program," "Kerr-Mills Law," "King-Anderson Bills," "MSMA Public Service Activities," and "Possible Topics for Inclusion in Testimony of County Medical Society Spokesmen."

In discussion it was brought out that each statement by a county society would differ, according to conditions in that locality. It was pointed out that it was not known just how the meetings would be conducted and whether or not the subject of each meeting would be adhered to.

It was asked that a suggested statement or outline be furnished each county prior to the meeting and Mr. O'Brien said that this would be done as well as having a member of the Association staff present at the meetings.

Statements: It was asked that statements to be presented be sent to the Association office prior to the time of the presentation.

Publicity: Publicity on the meetings was discussed. After discussion, on motion of Dr. Perry, it was voted

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3 Does not muddle the mind or affect normal behavior

to recommend to the Council that approximately $1,000 be made available for reporting of the meeting.

Witnesses: The following physicians to be spokesmen at the meetings were designated: Dr. Ralph Perry, for Kansas City; Dr. Furlow or Dr. Repetto for St. Louis City; Dr. Charles Miller for St. Louis County; Dr. Fisher for St. Joseph; Dr. John P. Ferguson for Springfield; Dr. Sweets for Hannibal, and Dr. Ritter for Cape Girardeau.

Lay Personnel: The counties involved were asked to give the names of lay people who would ask for time at the conferences to the Association office.

White House Conference on Aging, St. Louis, Nov. 7, 1961: A summary was presented of the White House Conference on Aging in St. Louis, November 7. A wind-up story about the Conference, written by Marsh Clark of the *St. Louis Globe-Democrat* is attached.

St. Louis *Globe-Democrat*
November 10, 1961

"SPEAKING OF POLITICS"

### "WORDS CAN'T DESCRIBE WHITE HOUSE PARLEY"

By MARSH CLARK
*Globe-Democrat* Political Editor

"The pursuit and capture of descriptive adjectives is the way writers make a living, but they would all go broke if they had to depend full-time on covering such wanting dull events as this week's White House Regional Conference here.

"The conference had a peculiar and nebulous quality that made it difficult to describe. About the best adjective the writer could apply to it would be 'bla,' although he would have to strain himself a bit to be that chivalrous.

"The conference was attended by a veritable legion of federal government officials from Washington, D. C., and it occasioned the amount of long-winded talk you might expect from anyone who came such a long way.

"PARTY VIEWS

"The Republicans criticized the conference in numerous press releases, saying it was merely a device used by the Kennedy administration to propagandize its program. The Democrats defended it, naturally, stating they were anxious to feel the public pulse, walk barefooted over the grass-roots, refresh themselves at the public fountainhead, et cetera.

"During breaks in the conference, newsmen talked in the corridors of Kiel Auditorium rather disconsolately trying to locate an adjective or two to properly describe the proceedings.

"This much can be said: If the administration intended to use the conference as a means of brain-washing the public to any great extent, it failed.

"If it intended to evoke an outpouring of public testimony on domestic problems, it failed too.

"MEETING DISJOINTED

"The conference was so disjointed in presentation that its point was lost, either in the hurricane of speeches or somewhere beneath the mountain of literature distributed.

"In the course of two short afternoons (with most of that time shot by the speechifying), the conference attempted to discuss almost every domestic issue of any consequence.

"There were panels of federal experts operating simultaneously in almost every cubbyhole in Kiel. In some rooms, the panel members seemed to outnumber the audience. In every room, the panel members found it necessary to deliver themselves of speeches concerning the federal programs within their area of responsibility.

"After they had finished speaking, the sessions were opened for questions in the short time remaining. But no effort was made to schedule the questions. The result was that many questioners made little speeches of their own or wandered far afield from the particular domestic problem their panel was supposed to solve.

"With rare exceptions, there were no give-and-take discussions. If the panel members go back to Washington and attempt to report to President Kennedy on what people at the grass roots are thinking, they had better know how to write fiction.

"SUBSTANCE OF QUESTIONS

"On one occasion, a prominent St. Louis County doctor tried to interrogate the panel members and the substance of his questions made it plain he was opposed to the Kennedy administration's program in that particular field.

"He was summarily and rudely cut off and his question left unanswered.

"On another occasion, a questioner was told by a Washington official 'write me a letter about that one,' hardly the way to bring about a free exchange of ideas on current topics.

"Nobody would agree with the conference if, indeed, it was designed to get Washington officials away from their desks and give them an opportunity to listen to the people.

"But as soon as any element of propagandizing enters into it, such a conference is removed from the holy, bi-partisan atmosphere with which its sponsors tried to surround it.

"Of the fact that there was a certain amount of propagandizing on behalf of the administration there can be no serious question.

"Indeed, this was frankly admitted in so many words by Jack T. Conway, a federal official who made the keynote speech.

"Referring to President Kennedy's campaign pledge to 'get this country moving again,' Mr. Conway said he and others have been working day and night since January to 'get this country moving again' and came to tell St. Louis all about it.

"Health, Education and Welfare Secretary Ribicoff made three speeches during the conference and two of them were pleas for public support of two pet Kennedy projects—federal aid to education and medical care for aged persons under Social Security.

"And of the fact that the conference failed to provide the Washington road show with any significant amount of grassroots sentiment there can also be no serious question.

"The speakers should have taken a cue from last year's Democratic National Committee platform hearings, one cf which was held here. The sessions lasted

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more than a couple hours and there was a minimum of filibustering by the panel members.

"Witnesses were scheduled in advance. There were experts by the dozens and there were plain old people off the street and all got a chance to say something. Information flowed from the public to the panel, not from the panel to the public. The Democratic National Committee picked up the tab, in refreshing contrasts to this week's conference.

### "CONFERENCE ENDS

"Anyway, the conference broke up here this week and the participants left town, some late Wednesday, some early Thursday, riding away to the airport, some of them in city Fire Department cars.

"Perhaps the most appropriate thing said at the conference was uttered by Commerce Secretary Hodges, in acknowledging his gracious introduction by Governor Dalton at the concluding session. What he said might apply to the conference itself.

"When he was working his way through school, he recounted he was waiting on tables and served up some piping hot porridge to a table. One student put the hot cereal in his mouth, then spat it out, spraying the stuff all over.

"Unabashed by his act, the student turned to young Hodges and exclaimed:

" 'You know, some damn fools would have swallowed that stuff.' "

Following this report, the hearings on Aging of the U. S. Senate Special Committee to be held early in December, with Senator Edward V. Long as Chairman, were discussed. Mr. Woolley reported on various A.M.A. activities and said that he would attend a hearing in Minneapolis just prior to the hearing in Kansas City, at which he would be present.

On motion of Dr. Stuart, duly seconded, the Committee report was accepted, with the exception of the portion dealing with publicity handling of the hearings.

### ANNUAL SESSION PROGRAM

Dr. Matthews presented the program for the 1962 Annual Session. The program for Wednesday morning which was planned to be a politico-socio-economic presentation was discussed. It was decided that this type of program would be announced but that details would be worked out later so that it could be more timely for the Annual Session. It was decided that presidents and secretaries of component medical societies and new members would be entertained on Sunday evening in a similar manner as was done in 1961.

### COMMITTEE ON TUBERCULOSIS

Dr. MacInnis presented the report of the Committee on Tuberculosis as follows:

Committee on Tuberculosis
Missouri Hotel, Jefferson City
October 1, 1961

Presiding: Florence E. MacInnis, M.D., Kansas City, Chairman.

Present: Drs. MacInnis; Paul Murphy, St. Louis; Joseph L. Lucido, St. Louis; David N. Kerr, St. Louis, of the Committee; representing the Division of Health were Drs. C. W. Meinershagen and E. A. Belden, Jefferson City; representing the Missouri Tuberculosis Association were Drs. J. C. Murphy, St. Louis; Thelma C. Buckthorpe, Sikeston; Charles A. Brasher and George H. Hobbs, Mount Vernon; E. E. Glenn, Forsyth; Miss Inez Moore, Liberty; Donald Pratt, St. Louis; Mr. Ray McIntyre and Miss Helen Penn, St. Louis, of the Missouri State Medical Association.

H. B. 83: Dr. MacInnis read H. B. 83, as follows:

### "AN ACT

"Relating to compulsory isolation of recalcitrant tuberculosis patients.

"Section 1. The following definitions shall apply to the words used in this act:

"(1) 'Communicable tuberculosis' means tuberculosis manifested by a laboratory report of suptum or other body fluid or excretion found to contain tubercle bacilli. Such finding shall be considered evidence of communicable tuberculosis for a period of at least three months and thereafter until three successive concentrated twenty-four hour specimens collected at weekly intervals are found to contain no tubercle bacilli.

"(2) 'Local Board' means any legally constituted local city or county board of health or health center board of trustees or the director of health of the city of Kansas City or the commissioner of health of the city of St. Louis, or in the absence of such board, the county court or county commissioners of any county.

"Section 2. When a person with communicable tuberculosis violates the rules, regulations, or orders promulgated by the division of health, and is thereby conducting himself so as to expose other persons to danger of infection, after having been directed by the local board to comply with such rules, regulations or orders, the local board may institute proceedings by petition, for commitment, returnable to the circuit court of the county in which such person resides, or if the person be a non-resident or has no fixed place of abode, then in the county in which the person is found. Strictness of pleading shall not be required and a general allegation that the public health requires commitment of the person named therein shall be sufficient.

"Section 3. Upon filing of the petition, the court shall set the matter down for a hearing either during term time or in vacation, which time shall be not less than five days nor more than fifteen days subsequent to filing. A copy of the petition together with summons stating the time and place of hearing shall be served upon the person three days or more prior to the time set for the hearing. Any x-ray picture and report of any written report relating to sputum examinations certified by the division of health shall be admissible in evidence without the necessity of the personal testimony of the person or persons making the examination and report.

"2. The prosecuting attorney or the city attorney shall act as legal counsel for their respective local boards in this proceeding and such authority is hereby granted. The court shall appoint legal counsel for the individual named in the petition if requested to do so if such individual is unable to employ counsel.

"3. All court costs incurred in proceedings under this act, including examinations required by order of the court but excluding examinations procured by the

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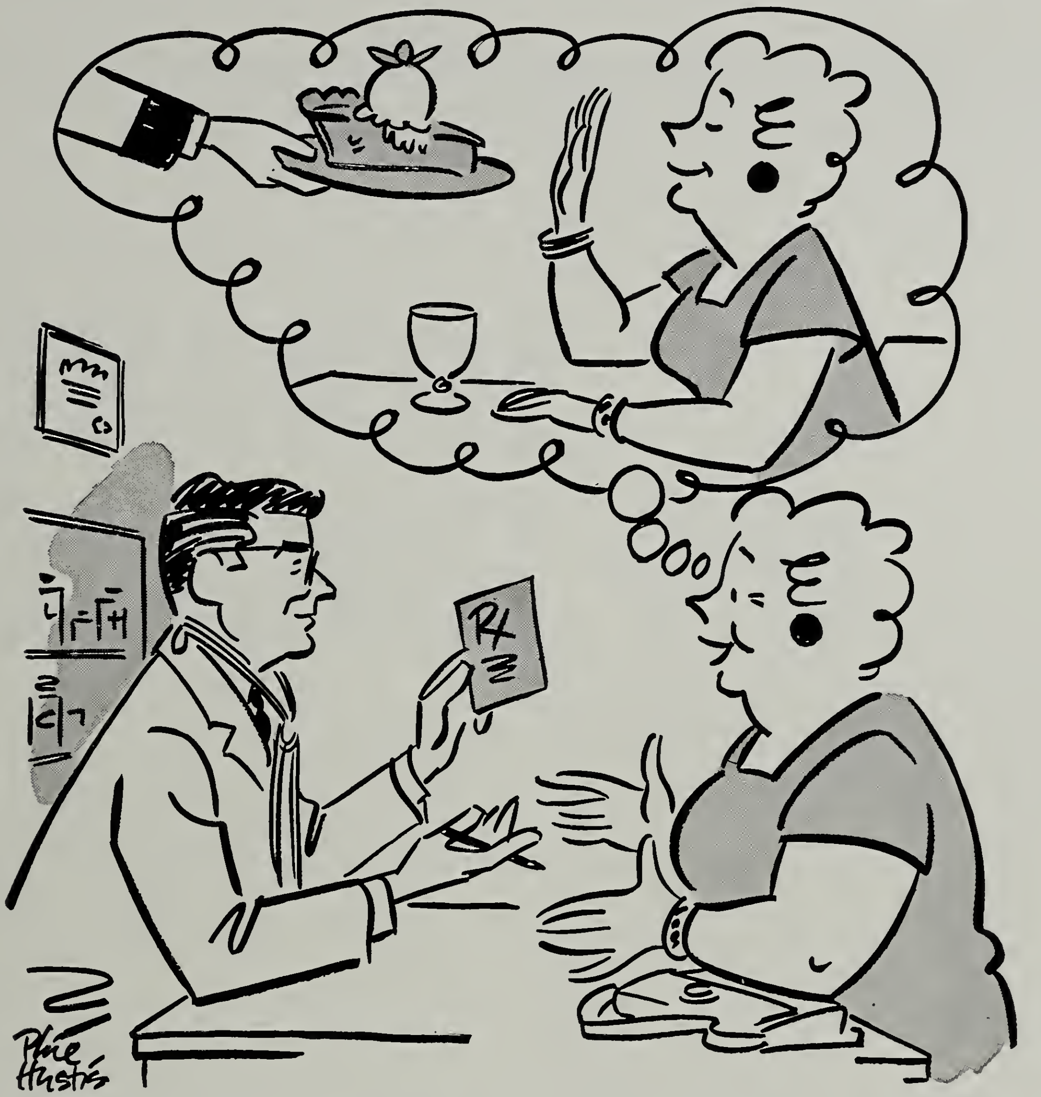

**Controls food craving, keeps the reducer happy** — In obesity, "our drug of choice has been methedrine . . . because it produces the same central effect with about one-half the dose required with plain amphetamine, because the effect is more prolonged, and because undesirable peripheral effects are significantly minimized or entirely absent." Douglas, H. S.: West.J.Surg. 59:238 (May) 1951.

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person named in the petition, shall be borne by the county in which the proceedings are brought.

"4. Summons shall be served by the sheriff of the county in which proceedings under this act are initiated and return thereof shall be made as in other civil cases.

"Section 4. Upon the hearing set in the order, the individual named in the order shall have a right to be represented by counsel, to confront and cross-examine witnesses against him, and to have compulsory process for the securing of witnesses and evidence in his own behalf. The court may in its discretion call and examine witnesses and secure the production of evidence in addition to that adduced by the parties; such additional witnesses being subject to cross-examination by either or both parties. Upon a consideration of the petition and evidence, if the court finds that the person named in the petition has communicable tuberculosis and conducts himself so as to be a danger to the public health, an order shall be issued committing the individual named in the petition to the Missouri State Sanatorium and directing the sheriff to take him into custody and deliver him to the sanatorium. If the court does not so find, the petition shall be dismissed. The cost of transporting such person to the Missouri State Sanatorium shall be paid out of general county funds.

"Section 5. The order shall be subject to review at the instance of either party, as in other civil cases.

"Section 6. Upon commitment, the patient shall be confined in the Missouri State Sanatorium until such time as the superintendent determines that the patient no longer has communicable tuberculosis or that his discharge will not endanger public health.

"Section 7. Any time after commitment, the patient or any friend or relative having reason to believe that such patient no longer has contagious tuberculosis or that his discharge will not endanger public health, may institute proceedings by petition, in the circuit court of the county wherein the confinement exists, whereupon the court shall set the matter down for a hearing before him within fifteen days requiring the person or persons to whose care the patient was committed to show cause on a day certain why the patient should not be released. The court shall also require that the patient be allowed the right to be examined prior to the hearing by a licensed physician of his own choice, if so desired and at his own personal expense. Thereafter all proceedings shall be conducted the same as on proceedings for commitment with the right of appeal by either party as herein provided; provided, however, such petition for discharge shall not be brought or renewed oftener than once every six months.

"Section 8. No person having communicable tuberculosis who is in his home or other place and obeys the rules and regulations of the division of health for the control of tuberculosis or who voluntarily accepts care in a tuberculosis institution, sanatorium, hospital or home, or other place and obeys the rules and regulations of the division of health for the control of contagious tuberculosis shall be committed under the provisions of this act.

"Section 9. No person committed to the Missouri State Sanatorium under this act shall be required to submit to medical or surgical treatment without his consent, or, if incompetent, without the consent of his legal guardian, or, if a minor, without the consent of a parent or next of kin.

"Section 10. The expenses incurred in the care, maintenance, and treatment of patients committed to the Missouri State Sanatorium under provisions of this act shall be paid from state funds appropriated for the maintenance and operation of the Missouri State Sanatorium.

"Section 11. The division of health shall provide such facilities at the Missouri State Sanatorium as are necessary to carry out the provisions of this act and may employ personnel as is necessary for the operation of such facilities."

Discussion: It was pointed out that this type of bill had been introduced about four sessions prior to the last Assembly, and that it would now become law on October 13. The necessity of state laboratory doing all the work was questioned and it was felt that this would probably be true except in cases where there was a public health laboratory. Whether it was mandatory that all patients go to the state sanatorium was questioned. It was pointed out that no appropriation accompanied the bill, that the Division of Health did not have funds to implement it, and it was decided that the bill probably would not be implemented greatly except in counties where there are health departments. Dr. Belden said that he would send out information about the law to public health agencies. Dr. Brasher discussed what would be necessary in remodeling and finances in order to handle these patients at the sanatorium.

Letter to Patients: Dr. Belden presented a suggested letter to go to patients to whom the law would apply, outlining the procedure of isolation in the home, or urging application for admission to a tuberculosis hospital, the letter to be signed by a health officer of a court.

Action: On motion of Dr. Paul Murphy, it was voted that the Division of Health announce the passage of the law together with rules and regulations when established in Missouri Medicine.

Prophylactic Treatment: Dr. Brasher discussed briefly work that is being done as prophylactic treatment for tuberculosis.

Drugs: Dr. Meinershagen presented the policies in effect at present concerning the Division of Health's program of tuberculosis drugs for treatment, as follow:

"1. The Section of Local Health Services supply the following drugs:

"Streptomycin (SM) 5 gm. vials. Isoniazid (INH) 100 mg. tablets in bottles of 1,000. Isoniazid (INH) 50 mg. tablets in bottles of 1,000.

"Sodium para-aminosalicylic acid (NaPAS) 500 mg. tablets in bottles of 1,000. Calcium para-aminosalicylic acid (CaPAS) 500 mg. tablets in bottles of 1,000. Potassium para-aminosalicylic acid (KPAS) 500 mg. tablets in bottles of 1,000.

"2. No restriction is placed on financial status of patient receiving drugs.

"3. The patient must be discharged from a tuberculosis hospital and under the medical care of a local physician.

"The discharge need not necessarily be medical but patients discharged A.M.A. should be encouraged to return to the hospital.

"4. A prescription from the patient's doctor should be presented for *each* supply of drugs issued. Prescriptions should be kept on file in the health office dispensing the drugs.

"5. A 60-day supply is recommended issue at one

# New
# **Robanul**™ signals a major improvement in duodenal ulcer therapy

From Robins research comes Robanul (generically, Glycopyrrolate), first of the "rigid-ring" anticholinergics, representing what may well be the most important advance in anticholinergic chemistry in a decade.

Clinically, both Robanul and Robanul-PH (with phenobarbital) have demonstrated a remarkable ability to provide within 90 minutes—and maintain for 6 to 10 hours—those nearly ideal pharmacologic healing conditions that mean prompt relief of ulcer pain and a successful recovery of your ulcer patient.

There are always important questions about any new therapeutic agent. Below are answers to some of the common ones asked about Robanul:

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Glycopyrrolate (Robins),
1.0 mg. per tablet
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## ROBANUL™-PH

Robanul with phenobarbital,
16.2 mg. per tablet

### First of all, what does "rigid-ring" mean?

Briefly, this: it describes the use of a fixed pyrrolidine pentagon, or rigid ring, which guarantees a constant 2-carbon distance between reactive parts of the molecule. In line with the "receptor site" concept of the mechanism of action of anticholinergics, this almost inflexible molecule is theoretically more likely to "fit" only certain receptor sites.

### Theories are all right, but is Robanul really more selective?

Yes! Evidence of its selectivity can be seen by the surprising lack of typical secondary anticholinergic effects (dry mouth, blurred vision, etc.) that occur at the effective dosage level of 1 to 4 mg. a day. Out of 499 duodenal and gastric ulcer patients treated at this level in investigative studies, only 4.4% had complaints of moderate to severe effects.

### How is it for reducing gastric acid?

One investigator[1a] found that a 2 mg. dose of Robanul lowered acid secretion 73% in one hour (compared to a basal-hour period) and 84% in two. A 4 mg. dose dropped secretion over 94% in one hour and 97% in two!

### What about acidity, or concentration of acid?

In one study, glycopyrrolate produced significant suppression of pH to 4.5 or higher in 5 of 5 duodenal ulcer patients given a 4 mg. dose, 7 of 8 patients given 2 mg., and 4 of 5 patients given 1 mg.[1b]

### Will Robanul depress gastric hypermotility?

In another study[2] with six subjects Robanul decreased gastric motility in every patient. Within 40 minutes after the administration of 2 mg. of Robanul, the frequency of gastric antral contractions decreased from 1 every 24 seconds to only 1 every 2½ minutes. Young and Sun[1c] found a similar effect. Moreover, their results in 7 patients indicated that Robanul, in a dose of 2 mg., did not produce delay in gastric emptying or intestinal transit.

### What's the best dosage schedule for Robanul?

It should be adjusted for each patient, and this is where Robanul offers another big advantage. Its "titratability" is unmatched among anticholinergic agents. Robanul's potency makes possible a recommended starting dose of only one milligram t.i.d. Yet its selectivity usually permits much leeway for dosage adjustment upward as necessary, to achieve the most effective dose level for each patient while maintaining a low incidence of undesirable effects on other organ systems.

### Is there anything else Robanul does for peptic ulcer?

Much more! For instance, 2 mg. cuts pepsin production about 50% in two hours; 4 mg., about 65%.[1a]...There is evidence that Robanul combats hormonal aspects of gastric secretions as well as vagal in many patients... ...Its activity lasts long enough to reduce acid secretion all night long.[3]...Many ulcer patients have remarked about its fast relief of pain....

**One last question:** Why not prescribe Robanul for your next duodenal ulcer patient and see for yourself just exactly how effective it is?

**References:** 1. From the New York Academy of Sciences, Conference on Peptic Ulcer, Oct., 1961. (a) H. C. Moeller. (b) D. C. H. Sun. (c) R. Young and D. C. H. Sun. 2. W. C. Breidenbach: Investigative clinical report, March, 1961. 3. I. A. Feder: Investigative clinical report, May, 1961.

Additional information upon request.

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time, but *no more* than a 90-day supply may be issued at one time.

"This requires the patient to visit the doctor at least every 3 months to secure a new prescription and be rechecked.

"6. If the patient continues on drugs longer than one year the health office should request a statement from the patient's physician, confirming the need of future drug treatment.

"A drug book may be set up in each district and local office to keep a record of drugs dispensed, to whom dispensed, and the amount.

"The cost of tuberculosis drugs is very high. It is hoped that each office dispensing drugs will use discretion in the amounts and to whom dispensed, even though there are no official restrictions placed on this program.

"Addition: In regard to prophylactic treatment, it was suggested that the following should be added to present policy:

"Drugs for the treatment of tuberculosis are provided to make it possible for the indigent and medically indigent to continue the chemotherapy started in the sanatorium.

"It is possible to discharge patients earlier from expensive hospital care where there is assurance that definitive tuberculosis therapy can be continued in the home.

"INH is not expensive—10 cents per day is about the average cost of this drug. The group suggested this fact should be made known to physicians.

"Drugs will be provided to all household contacts to a known active case of tuberculosis who are under three years of age.

"Recent converters to tuberculin and other household contacts of known active cases particularly individuals with large reactions to the tuberculin test may be supplied with tuberculosis chemotherapy on the request and prescription of the attending physician.

"All reported and proven active cases of tuberculosis on prescription of the attending physician will be supplied with tuberculosis chemotherapy."

Following discussion, on motion of Dr. Fisher, duly seconded, the report was accepted.

### MEMBERSHIP

The problem of state association membership of physicians living or having offices in other states (particularly Jackson County and counties in Kansas) was discussed. It was decided that the Chairman should appoint a committee to work with members of the Council of the Kansas State Medical Society to try and work out the problem and that if that failed, it should be referred to the A.M.A. Judicial Council.

### INSURANCE

It was announced that two insurance companies wished to make accident and sickness insurance avail-

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able to physicians and their employees. On motion of Dr. Dowell, duly seconded, the Executive Secretary was asked to advise the America Fore Group that their proposal to provide weekly sickness and accident benefits to the employees of Missouri physicians is accepted.

The second proposal to provide accidental death benefits in large limits for members and their spouses was considered. On motion of Dr. Dowell, duly seconded, the Secretary was instructed to examine the differences in two separate proposals and to obtain the one which offers the best buy for the members.

### A.M.A. CLINICAL SESSION

Dr. Hollweg said that Kansas City and the Jackson County Medical Society would like to invite the A.M.A. to hold a clinical session in Kansas City, and on motion of Dr. Whitener, duly seconded, it was voted that the Association write the A.M.A. on their behalf.

### A.M.P.A.C.

A.M.P.A.C., The American Medical Political Action Committee, an organization totally separate from the A.M.A. and organized for political action was discussed. The Chairman appointed Drs. Summers, Dowell and Furlow to make further study and report to the Council.

### NEXT MEETING

It was decided that the next meeting of the Council would be held January 20 and 21, 1962, in St. Louis.

Kenneth C. Hollweg, M.D., *Chairman*

## SEMINAR ON MEDICINE AND SURGERY TO BE PRESENTED

A postgraduate seminar on medicine and surgery will be presented on February 4 at the Missouri State Sanatorium, Mount Vernon. The seminar will be sponsored by the Southwest Chapter of the Missouri Academy of General Practice and Eli Lilly and Company, with assistance from the Missouri Trudeau Society, the Missouri Chapter of the American College of Chest Physicians and the staff of the Missouri State Sanatorium. The program is acceptable for six hours Category I credit for Academy members.

### Program

Session I. Chairman, Fred L. Wommack, M.D., Crane
Greetings, C. A. Brasher, M.D., Mount Vernon

9:00 a.m. Clinical-Pathologic-Radiologic Conference.
Moderator: H. Vernon Langeluttig, M.D., Mount Vernon.
Case Presentation, Alan Bailey, M.D., and Cesar Cardenas, M.D., Mount Vernon.
Discussion of X-rays and Surgery, John W.

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Polk, M.D., Springfield, and W. W. Buckingham, M.D., Kansas City.
Presentation and Discussion of Pathology, Henry Sweany, M.D., Mount Vernon, and Dave Gorelick, M.D., Springfield.
10:30 a.m. Bronchiectasis, Duane Carr, M.D., Memphis, Tenn.
11:05 a.m. Discussion.
11:15 a.m. Current Management of Cancer of the Colon, Charles Lockhart, M.D., Springfield.
11:50 a.m. Discussion.
12:00 noon Lunch

Session II. Chairman, Mary J. Newman, M.D., Cassville

1:00 p.m. Management of the Usual Complications of Labor, William Masters, M.D., St. Louis.
1:30 p.m. Discussion.
1:40 p.m. Office Management and Follow-up Care of Patients With Tuberculosis, Florence MacInnis, M.D., Kansas City.
2:00 p.m. Discussion.
2:10 p.m. The Selection in the Office of Patients for Referral for Cardiac Surgery, Robert Ziegler, M.D., Detroit, Mich.
2:50 p.m. Discussion.
3:00 p.m. Coffee break.

Session III. Chairman, Harold C. Lentz, M.D., Neosho

3:15 p.m. The Diagnosis and Management of Esophageal Lesions, John W. Polk, M.D., Springfield.
3:45 p.m. Discussion.
3:55 p.m. Differential Diagnosis of Anemias in the Office, Dan Dolan, M.D., Springfield.
4:25 p.m. Discussion.
4:35 p.m. The Recognition and Management of Impaired Resistance to Infections, J. Lewis Yates, M.D., Mount Vernon.
4:55 p.m. Discussion.

## WOMAN'S AUXILIARY

*(Continued from page 108)*

state with a larger proportion. According to the 1959 Bureau of Labor Statistics it is estimated that a modest but adequate level for a couple, not in need of medical care, would be $3,034.00 a year in Kansas City, and $3,099.00 a year in St. Louis.

The financial problems of our Senior Citizens are most evident when we realize the average Old Age Assistance grant in our state is $60.00, and the average Social Security payment is $72.00 a month. Since the income available to Senior Citizens who may be entirely dependent upon these two programs, is not adequate for their basic needs for food, clothing and shelter—without considering any medical expense, it becomes incomprehensible how the Social Security Administration can add a new "benefit" as in the proposed health care program. It seems tragic that the Senior Citizens, who today according to the Bureau of Labor Statistics figures, are without adequate finances for food, clothing and shelter, are being confused into thinking that, although their basic needs are not met by these programs, their health needs will be. Adequate food is far more palatable to our Senior Citizens than the most copious dose of medicine.

Another contributing factor to the problems of our Senior Citizens is the worry and loneliness of "being placed on the shelf" at age 65. Medicine teaches that atrophy can come from disuse. In a nation where the life span has increased almost 30 years during our lifetime, are we not limiting full realization of citizenship potential when we arbitrarily cut off the productive years at age 65? There must be another way for our social planners to make way for our youths, other than closing the employment doors on our most experienced workmen and women. This practice also limits income available to Senior Citizens who wish to continue working but are cheated out of fair income for their labor as others may be willing to do the same work at a far lesser wage so they can continue to draw social security benefits.

We hope that Missouri will soon implement the Mills-Kerr bill which gives medical assistance based on need, not on age. It is interesting to note that Missouri ranks 21st in average per capita income, and ranks 42nd per capita in state tax collections. We realize the State Legislature has many problems to consider. Since we have the second highest per capita number of persons over age 65 in Missouri, it would seem that this is a priority problem deserving immediate consideration. The problem of medical care for our Senior Citizens rests with the profession responsible for supplying it, and those who are to receive it as patients. Somehow I think all Americans cherish this personal relationship.

One Senior Citizen at Senator Long's hearing was surprised and shocked at some of the unwarranted criticism being levelled at the medical profession. It was evident that he was there to hear what was going on, and here is how he summed it up, "The criticism has gone far enough," he stated, "what are they trying to do, kill the goose that laid the golden egg?"

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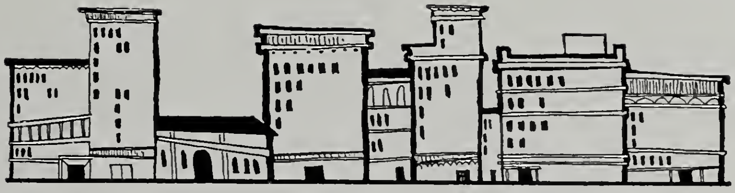
# From the Medical Schools



## UNIVERSITY OF MISSOURI

### Meetings

A program on "Communication and Health" centering about physician-patient communication was held for Missouri physicians at the University of Missouri Medical Center Auditorium December 7, presented by the University's department of psychiatry and its Continuing Education Service in cooperation with the Missouri Academy of General Practice.

Included in the program was one panel relating to pediatric patients, on "Communication and Child Health," during the morning, and a panel relating to adult patients on "Communication and Adult Health," in the afternoon. Each panel was preceded by a "keynote" speech by a psychiatrist. Featured was a special lecture on the theme of the day's discussion, given at 3:00 p.m. by Eugene M. Brody, M.D., professor of psychiatry and director of the Psychiatric Institute, University of Maryland School of Medicine, Baltimore.

### Visitors

Dr. E. P. Kennedy, since 1941 a biochemist and currently serving on the staff of the Harvard Medical School, spoke on "Studies in the Metabolism of Lipids" at 4:00 p.m., December 11, in the Medical Center auditorium. Dr. Kennedy's talk is the first this year in a series started last year called "Special Topics in Biochemistry." The next speaker in the series will be Prof. Daniel Arnon of the University of California on Jan. 15. The lectures are open to the public.

Dr. Lucy D. Ozarin, chief of mental health services, Kansas City Regional Office, U. S. Public Health Service, visited the department of psychiatry at the UMMC to discuss with department staff members projected research and teaching programs and support. Dr. Ozarin's visit here was on November 29, 1961.

### Trips and Talks

Dr. Jerry W. Brown, associate professor of anatomy, attended the annual meeting of the Association for Research in Nervous and Mental Diseases in New York City, December 8 and 9. On Dec. 10, he visited New Haven, Conn., where he conferred with Dr. Davenport Hooker on a mutual research program. While there he toured the department of anatomy at Yale Medical School, where Dr. Hooker is lecturer. He is also professor emeritus of anatomy of the University of Pittsburgh.

Dr. Frank B. Engley Jr., professor and chairman of the department of microbiology, visited Fort Detrick Chemical Corps Laboratories in Frederick, Md., Nov. 5 through 7, and participated in a conference on "Air Borne Infection." In Detroit, Mich., Nov. 12. November 13 to 16, he attended the annual meetings of the American Public Health Association in Detroit, the meeting of the committee on antimicrobials (germicides) of which he is a member and took part in a panel discussion on "The Testing of Antimicrobial Agents" at the Laboratory Section Meetings. Dr. Engley also presented lectures at an extension course in General Hygiene in St. Louis on the subjects of "Water Borne Disease, Chronic Disease and Health Agencies," Nov. 29. On Dec. 2, he attended a meeting in St. Louis of the Eastern Missouri Branch of the American Society for Microbiology for which he is national councillor.

Dr. Herbert S. Goldberg, professor of microbiology, attended the Leptospirosis Research Conference in Chicago, Nov. 28 to 30; the 80th meeting of the Eastern Missouri Branch of the American Society for Microbiology at the Jewish Hospital in St. Louis Dec. 2, where he was elected vice president of the EMB; and the Central State Conference of the American Medical Technologists to hear papers on mycology and tuberculosis, Dec. 1, in St. Louis.

Dr. James T. Barrett, associate professor of microbiology, presented a paper "Common Antigens of Guinea Pig Organs Revealed by Gel Diffusion," coauthored with Herbert Rubin, third-year medical student, at the Eastern Missouri Branch meeting of the American Society for Microbiology Dec. 2. Dr. Barrett was elected to the office of president during the business portion of the meeting.

Dr. D. P. Durand, assistant professor of microbiology, presented a scientific report at the EMB meeting Dec. 2 in St. Louis, on "Density Gradient Studies on Newcastle's Virus," coauthored with Wayne Stenback.

Dr. David G. Hall, assistant professor of obstetrics and gynecology and acting chairman of the department, attended a meeting of the Medical Education for National Defense group Nov. 28 to Dec. 2, in Washington, D. C.

Dr. M. Pinson Neal, professor emeritus of pathology, Dr. Van Peenen, assistant professor of pathology, and Myra Pearman, presented a medical technology recruitment program at Lindenwood College in St. Charles, Mo., November 30, 1961. Students and faculty members saw a film, "The Human Cell and the Cytotechnologist" and participated in comments and discussions on medical technology.

Dr. Robert E. Froelich, assistant professor of psychiatry, who has produced six teaching films in the field of psychiatry and neurology, attended a meeting of the Society of Motion Picture and Television Engineers at the Dallas Jones Studio in Chicago, December 5. The Committee is gathering planning data for construction of a sound studio in which teaching films can be produced by the medical school. The films by Dr. Froelich are available for county medical society meetings by contacting him at the department of psychiatry.

Dr. Fernando Tapia, assistant professor of child psychiatry, discussed the needs of children on KFRU radio, in Columbia, Dec. 12 and 13, answering questions asked him by the program's master of ceremonies.

Dr. John J. Modlin, professor and chairman of the department of surgery, attended a meeting of the Jasper County Medical Society in Joplin, Mo., December 12. "The Cancer Problem in Missouri" was the topic of discussion.

Dr. Hugh E. Stephenson Jr., professor of surgery, attended the scientific sessions as a guest at the Southern Surgical Association meeting held at The Homestead in Hot Springs, Va., Dec. 5 to 7, and discussed a paper on "The Surgical Treatment of Constrictive Pericarditis." Dr. Stephenson also spoke to the Marion-Ralls-Shelby County Medical Society on "Newer Advances in the Restoration of the Heart Beat," Nov. 21 in Hannibal, Mo.

Dr. Samuel P. W. Black, professor of surgery, attended the annual meeting of the Association for Research in Nervous and Mental Disease in New York City, Dec. 8 and 9. On Dec. 7 he attended a meeting of the American Epilepsy Society there.

Dr. Ian Thompson, professor of surgery (urology), represented the M.E.N.D. Committee to attend the Self Help Program, Nov. 19 to 22, in Alameda, Calif. Dr. Gilbert Ross Jr., instructor in surgery, also attended the meeting in Washington, D. C. Nov. 28 to Dec. 1, and in Battle Creek, Mich., Dec. 3 to 8.

Dr. Edward Johnson, assistant instructor in surgery, visited the New York Rochester Medical Center Hospital, observing and assisting in operations, and observing research laboratories. Dr.

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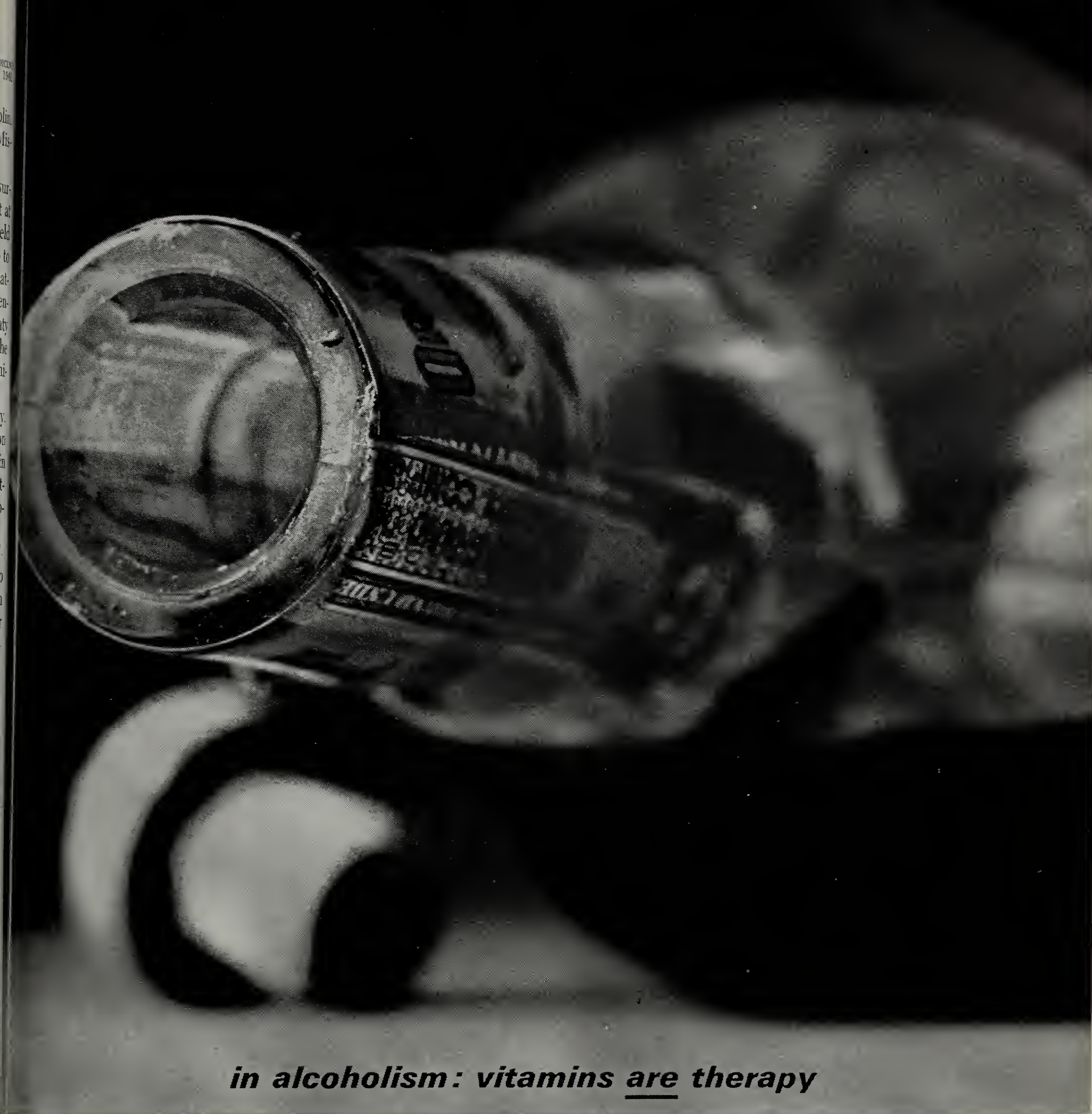

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Robert Smith, assistant instructor presented two exhibits at the International College of Surgeons meeting in San Francisco, Nov. 15 to 27.

Dr. John A. Buesseler, professor of surgery (ophthalmology), was an associate examiner for the American Board of Ophthalmology examinations held in Chicago, Oct. 5, 1961. He also presented a postgraduate course entitled "Ophthalmic Radiology: Diagnosis" at the annual meeting of the American Academy of Ophthalmology and Otolaryngology on Oct. 10.

Dr. Felix N. Sabates, special resident fellow in surgery (ophthalmology), attended the 55th annual meeting of the Southern Medical Association in Dallas, Tex., Nov. 6 to 9. The following physicians from the section of ophthalmology attended the first annual Refresher Course of the Kansas City Society of Ophthalmology and Otolaryngology Dec. 6 to 8, in Kansas City: Drs. Buesseler, Sabates, John T. Schwartz, assistant professor, Wilber Spalding, assistant instructor, Walter Bass, assistant instructor, and John Irvine, assistant instructor.

## WASHINGTON UNIVERSITY

### Faculty Elected

Alumni and faculty members at Washington University School of Medicine have been elected to Alpha Omega Alpha, honorary society recognizing scholarship and leadership in medicine and related fields. Dr. A. Norman Arneson, professor of clinical obstetrics and gynecology and associate professor of clinical radiology, and Dr. Frank McDowell, associate professor of clinical surgery, were elected as alumni members along with Dr. Richard Mason, who is vice president for research of the American Cancer Society, Inc., New York City. Dr. Margaret G. Smith, professor of pathology, was elected faculty member. Dr. Eli Robins, professor of psychiatry, was honored for membership by the Harvard University chapter. The Washington University chapter is the seventh oldest in the country, dating from 1905.

Several staff members have been elected officers of the St. Louis County Medical Society. Dr. John S. Skinner, instructor in clinical medicine, has been chosen vice president. Serving on the council will be Dr. Robert J. Mueller, instructor in clinical neuropsychiatry; Dr. Melvin M. Schwartz, assistant in clinical obstetrics and gynecology, and Dr. James C. Sisk, instructor in clinical medicine. Dr. Oscar Hampton Jr., assistant professor of clinical orthopedic surgery, and Dr. George J. L. Wulff, assistant professor of

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clinical obstetrics and gynecology, were elected to the House of Delegates.

### Librarians Attend Dedication

Three members of the library staff at Washington University School of Medicine participated in dedication ceremonies of the National Library of Medicine, Bethesda, Md. Dr. Estelle Brodman, librarian and associate professor of medical history, discussed one of the library's founders during the dedication ceremony. Attending the dedication also was Mr. Irwin Pizer, reference librarian and Mr. Robert Austin, deputy librarian. Mr. Austin is the author of the recently published "Early American Medical Imprints, a Guide to Works Printed in the United States, 1668-1820." the annotated bibliography contains 2,106 entries and is the only such listing of medical writings of the period. Dr. Brodman will go on leave of absence in February from the School to serve as visiting professor at the Japan Library School, Keijo University, Tokyo.

### Faculty Honors and Grants

Dr. Marguerite A. Constant, associate professor of biochemistry in ophthalmology, has been awarded the Fight for Sight Citation at a meeting of the Association for Research in Ophthalmology held recently in Detroit.

Two promotions have been announced. Dr. Muriel W. Pumphrey was named assistant professor of social work in the department of psychiatry and neurology, and Miss M. Frances Watson was named assistant professor of social and environmental studies in preventive medicine.

Dr. Wendell G. Scott, professor of clinical radiology, was the author of the guest editorial in a recent issue of *The New Physician,* publication of the Student American Medical Association. Dr. Scott served as coordinator for the magazine staff in collecting material of interest to students in this special issue on radiology.

Dr. Eli Robins, professor of psychiatry, has been awarded a $58,785 grant from The National Foundation-March of Dimes for study of nerve cells. Dr. Robins, working under Foundation grants for the last ten years, has been engaged in getting complete chemical composition of normal and disease nerve cells in different parts of the central nervous system. He is also undertaking a study to attempt to understand why different forms of the same enzyme are found in different regions of the nervous system.

*(Continued on page 186)*

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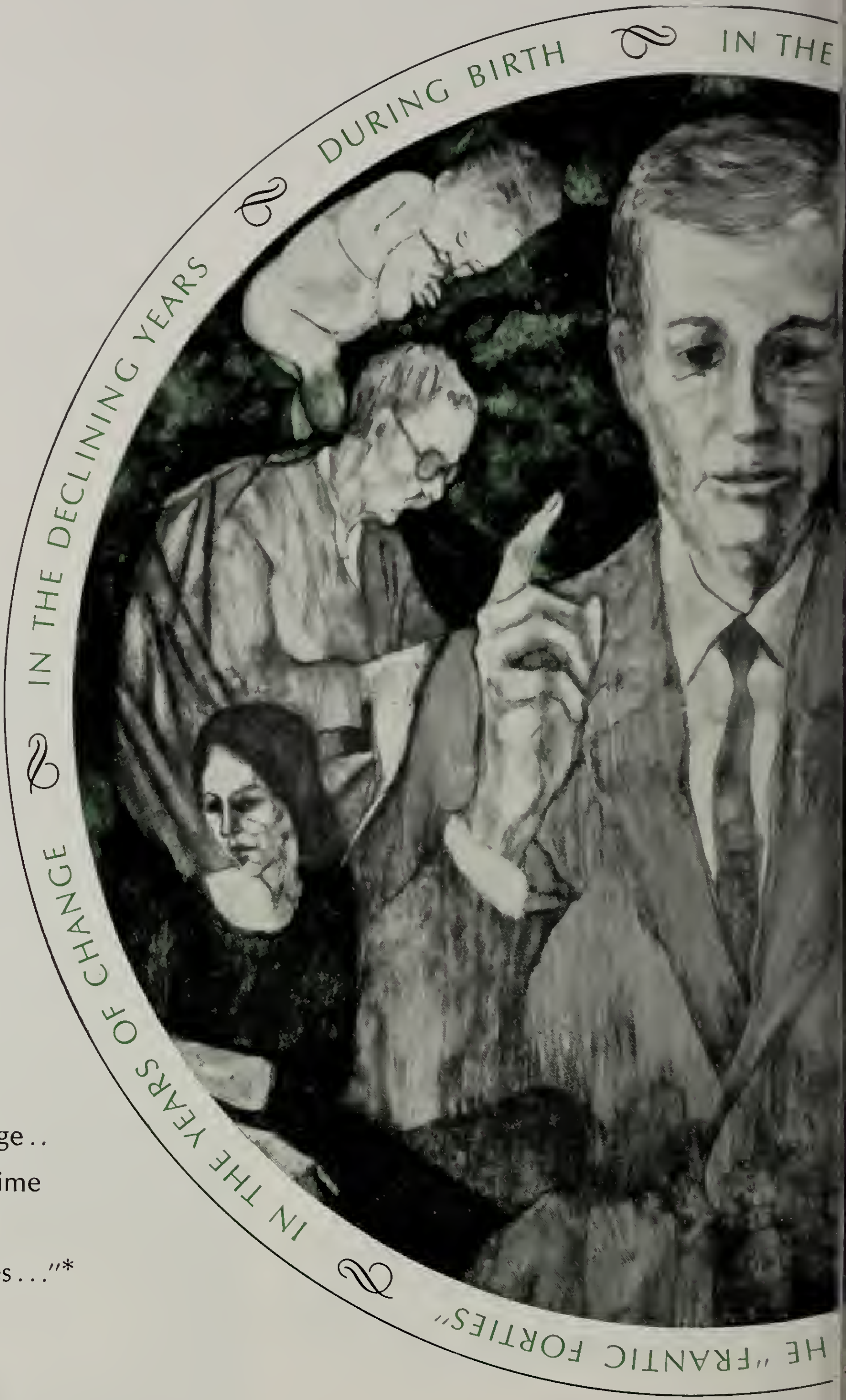
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IN THE DECLINING YEARS
IN THE YEARS OF CHANGE
HE "FRANTIC FORTIES"

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And one man in his time
plays many parts,
His acts being seven ages..."*

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1. King, J. C.: Int. Rec. Med. 172:669, 1959. 2. Weiner, L. J., and Bockman, A. A.: Sci. Exhibit, A.M.A., Ann. Meet., New York City, June 26-30, 1961.

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Parenteral dosage for adult psychiatric and emotional emergencies, including acute alcoholism: I.M.—50-100 mg. Stat., and q.4-6h., p.r.n. I.V.—50 mg. Stat., maintain with 25-50 mg. I.V. q.4-6h., p.r.n.

**SIDE EFFECTS:** Drowsiness may occur in some patients; if so, it is usually transitory, disappearing within a few days of continued therapy or upon reduction of dosage. Dryness of mouth may be encountered at higher doses.

**PRECAUTIONS:** Drowsiness may occur in some patients. The potentiating action of hydroxyzine should be taken into account when the drug is used in conjunction with central nervous system depressants. Do not exceed 1 cc. per minute I.V. Do not give over 100 mg. per dose I.V. Parenteral therapy is usually for 24-48 hours, except when, in the judgment of the physician, longer-term therapy by this route is desirable.

**SUPPLIED:** VISTARIL *Parenteral Solution* (hydroxyzine hydrochloride)—10 cc. vials, 25 mg. per cc. and 50 mg. per cc.; 2 cc. ampules, 50 mg. per cc. VISTARIL *Capsules* (hydroxyzine pamoate)—25, 50, and 100 mg. VISTARIL *Oral Suspension* (hydroxyzine pamoate)—25 mg. per 5 cc. teaspoonful.

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## ST. LOUIS UNIVERSITY

### Appointment

Goronwy O. Broun, M.D.

Dr. Goronwy Owen Broun, professor of internal medicine at the School of Medicine of St. Louis University, was named dean of the school by the Very Rev. Paul C. Reinert, S.J., University president, December 29.

Dr. Broun assumed the duties of dean on January 1, succeeding Dr. James W. Colbert Jr.

Nomination of Dr. Broun as new dean of the school was approved at a meeting of the administrative board of the School of Medicine, and, subsequently by the departmental directors of the school. The appointment was confirmed by the Board of Trustees of the University.

Dr. Broun has served on the faculty of the School of Medicine for thirty-seven years and has conducted significant research in the field of virus diseases.

In announcing the appointment, Father Reinert noted that Dr. Broun "has been instrumental in the past achievements of the school and is firmly committed to its long-range objectives: development of a corps of full-time faculty in all departments of the school, and a strong, balanced academic program in teaching and research.

"In assuming his new duties, Dr. Broun has been assured of the cooperation and assistance of his colleagues at the School of Medicine, who are equally dedicated to its continued progress."

He received his degree from the St. Louis University School of Medicine in 1918, and, after internship at the Jewish Hospital in St. Louis, served as a fellow and assistant at the Rockefeller Institute for Medical Research, and as assistant in medicine at the Harvard Medical School at Boston City Hospital. He joined the medical faculty of St. Louis University in 1924.

From 1933 to 1938 his research on St. Louis encephalitis was a major addition to the knowledge of infectious diseases. In 1950 he established a collaborating laboratory with the World Health Organization Influenza Study Program for the study of influenza virus, and in 1956 the exhibit presenting the work of his laboratory received a Certificate of Merit from the American Medical Association.

In 1957, with the outbreak of Asian flu, his laboratory made significant contributions to the understanding of its world-wide epidemiology. Currently, his laboratory is seeking to delineate the flu-type virus that has struck many St. Louisans.

He has also conducted research on liver disease, anemia, nutrition, respiratory disease and leukemia, and is the author of more than 100 scientific papers. He is the author of the section on encephalitis in the *Oxford-System of Medicine.*

He has served the School of Medicine as secretary of the Hospital Board, as medical director of Firmin Desloge Hospital and the University's out-patient department, and as director of the department of medicine from 1954 to 1958.

In 1960, Dr. Broun received the University's Alumni Merit Award "for his dedication to teaching, research and patient care."

A native of Mobile, Alabama, he received a bachelor of arts degree from Spring Hill College, Alabama, in 1914. In World War I, he served in the Medical enlisted reserve corps.

Earlier this year, he delivered one of the principal papers at the fifteenth General Assembly of the World Medical Association in Rio de Janeiro. Recently he was named a knight of The Holy Sepulchre by Pope John XXIII.

He is a member of the American Medical Association, American College of Physicians, American Society for Clinical Investigation, St. Louis Medical Society, St. Louis Society for Internal Medicine, Missouri State Medical Association, Southern Medical Association, Central Society for Clinical Research, American Society for Experimental Pathology, American Society for Experimental Biology and Medicine, Society of American Bacteriologists, Central Inter-Urban Clinical Club, Alpha Omega Alpha, and Sigma XI.

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# Curiosa et Trivia

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Horace Greeley's advice didn't go unheeded: of the five largest cities in the U. S., four showed population decreases between 1950-60; Los Angeles gained over half a million people . . . an increase of 26 per cent.

---

When Congress convenes every January, more than 100 bills are introduced to put drugs, hospitals and doctors under government regulation or control.

---

Maybe we're unduly apprehensive, but so far we haven't screwed up the courage to stop by any one of the filling stations to have our car checked on an Anal-O-Scope.

---

A plastic surgeon friend reports that collections for repair of fractured jaws does not exceed 15 per cent. This probably proves something, but someone else will have to interpret it.

---

Americans 20 to 25 years old have, on the average, 40 nevi per person; but in the 50 to 90 age group, the average is only four per person.

# Capsule Clinics

- Incorporation of Senokot into the barium meal, unless specifically contraindicated, seems to be a desirable method of avoiding stasis problems in gastrointestinal radiography. Matzer, M. J., and Tirsch, H., Am. J. Gastroenterol. 36:445, 1961.

- Early artificial feeding increases the liability to ulcerative colitis in later life. Acheson, E. D., and Truelove, S. C., Brit. M. J. 2:929, 1961.

- Children in whom diabetes appeared before the age of 5 years had significantly lower I.Q.'s than their nondiabetic siblings. Ack, M., et al., Pediatrics 28:764, 1961.

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# WASHINGTON

## Finance Committee Balks

The Senate Finance Committee rejected a speedup proposal for getting action on the Administration's aged care bill. On January 31, by a vote of 9 to 7, the committee turned back a motion by Sen. Clinton P. Anderson (D., N. M.) that it hold public hearings on the issue no later than April 1, whether the House had sent a bill to the Senate or not. Anderson's motion was aimed at by-passing the House Ways and Means Committee where H.R. 4222 is pending. A health care bill for the aged may still be brought up on the Senate floor as a rider to another bill, and Anderson has already pledged to make this move if H.R. 4222 fails to clear the House. There has been talk that the Administration's aged care program would be tied to the House-passed H.R. 10, which would provide a tax-deferred retirement plan for the self-employed. The A.M.A. and other professional organizations have testified in favor of H.R. 10. However, since quick action is expected on the President's Welfare Program, H.R. 10032, some legislative experts believe it would be more logical to attach the aged care bill to this measure. Sen. Harry F. Byrd (D., Va.), chairman of the Finance Committee, said the vote upheld a long-standing policy of the committee that it will not act on revenue legislation before the House has completed action. Byrd added that under the Constitution, the House must originate all bills dealing with changes in the social security or revenue laws. According to news reports, voting with Byrd against Anderson's proposal were Senators Robert Kerr (D., Okla.), Herman Talmadge (D., Ga.), William Fullbright (D., Ark.), John Williams (R., Del.), Frank Carlson (R., Kan.), Wallace Bennett (R., Utah), John Marshall Butler (R., Md.) and Carl Curtis (R., Neb.). Voting for immediate hearings were Senators Anderson, Russell B. Long (D., La.), Paul Douglas (D., Ill.), Albert Gore (D., Tenn.), Eugene McCarthy (D., Minn.), Vance Hartke (D., Ind.), and Thruston Morton (R., Ky.). Although Morton was reported to have voted for immediate consideration of the aged care bill, the following day he publicly stated his opposition to the King-Anderson bill before a meeting of Young Republicans.

## Ways and Means Busy

The House Ways and Means Committee is not expected to take up H.R. 4222 in the near future. The committee was to take up the Welfare Bill H.R. 10032 on February 7. Then it must consider the new tax legislation and the President's proposals for extending the reciprocal trade agreements act and for granting him broad new authority to lower and revise tariffs. The President's trade proposals are so broad and go so far beyond existing law that committee hearings on them are expected to be lengthy. At the same time, prompt action is needed on the trade proposals since the Trade Act expires on June 30.

The President's welfare reorganization recommendations sent to Congress on February 1 included provisions to allow states to submit, under a new title to the Social Security Act, single unified plans combining assistance programs for the aged, blind and disabled, and medical assistance for the aged. These states would receive additional federal matching grants for medical payments to the blind and disabled.

## Legislative Conference

More than 400 key medical society representatives attended the Medical Legislative Conference, sponsored by the A.M.A. in Chicago, January 26-27. Speakers at the meeting included Representatives Bruce Alger (R., Texas), and Durward Hall (R., Mo.). Congressman Alger declared that if the A.M.A. followed through its legislative blueprint, it would defeat H.R. 4222 in the present Congress. However, he warned, "if we don't get a conservative Congress in the next election, all of us will be socialized." He urged a three point program: "Educate, Lobby, Elect." Congressman Hall advised the medical profession to continue to lay stress on the 25 members of the House Ways and Means Committee. At the same time, he added that the other 412 members of the House should not be overlooked. The conference featured Regional Workshop Sessions in which specific technics for effective legislative action were discussed.

*(Continued on page 283)*

# nd it is still my stand-by for pain relief today.”

PICTURE THE YOUNG DOCTOR with his first private patient, about thirty-five years ago. This is the moment, after years of study and guidance in class-oom and at hospital bedside, when he assumes the full weight of responsibility or the well-being of his patient. He makes his diagnosis. The patient is in con-iderable pain, and his first concern is to relieve this discomfort. He writes a rescription for a new analgesic, a convenient drug combination that he believes ill be of help. This patient (and many others to follow) finds gratifying relief, nd the physician continues to rely upon this medication as the years go by.

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Across
Missouri

### Hospitals in the News

In January two additional sections of the Boone County Hospital, Columbia, were opened, providing 32 more beds. There was a realignment of patient-care areas, including establishment of pediatric and minimal-care units. The plan is on a 90 day trial basis.

A campaign to raise an additional $40,000 above the original estimate for the new wing of the Missouri Delta Community Hospital is under way. It is principally for replacement of old equipment.

Twelve patients in the annex of the Wright Memorial Hospital at Trenton were moved into the hospital proper with the completion recently of a new wing of the hospital.

Preliminary plans for a nursing home addition to the Southeast Missouri Hospital at Cape Girardeau were recently announced.

An expansion to add 56 beds to the Audrain County Hospital, Mexico, with construction probably starting in the fall, was announced recently by the hospital board of trustees.

The city council of Nevada plans an election on April 3 on the annexation of the State Hospital into the City of Nevada.

Location of a new Chronic Hospital in St. Louis has been selected, on the grounds of the present Chronic Hospital on Arsenal Street.

### Statistics, Statistics

*Vital Statistics, Missouri 1960,* has recently been issued by the Department of Public Health and Welfare of Missouri.

Almost any statistic concerning population, natality, mortality, marriages and divorces can be found in the volume. Many statistics compare figures from 1910 through 1960, such as live births and death rates with population by age groups going back to 1890 for comparison.

Aside from all the medical vital statistics, of the 88 pages 13 deal with marriage and divorce.

### Farm Bureau Opposes H.R. 4222

In a legislative bulletin, "On the Legislative Front," from the public relations department of the Missouri Farm Bureau Federation, in a discussion of "Medical Care for the Aged," the bulletin states:

"We are opposed to the Health Insurance Benefit Act (H.R. 4222) because:

"1. Basically, it would transfer the responsibility for medical care from the individual and the family to government, which would inevitably lead to federal control of medicine. Whoever foots the bill must have control of the purse strings.

"2. It would mean poorer, not better, health care for the aged because government employees would have to administer the rules and regulations for operation of the program.

"3. Private health insurance would decline, if not be eliminated entirely. Private enterprise cannot compete with government enterprise, which is tax free; has the limitless expanse of the taxpayer's pocketbook, and the ability to borrow on your grandchildren's future.

"4. The cost would be staggeringly expensive. Social Security taxes are now scheduled to reach 9 per cent of payroll by 1969. This program would increase Social Security taxes still further."

After discussion and analysis of the Kerr-Mills act, the bulletin finishes with the following:

"The question then arises: What can we do to assist older folks who do not have the money to provide themselves with adequate medical care?

"We feel the need for medical care can be met on a local level through private and local-state programs at less cost to the taxpayer and with better health care for the aged, which will not stifle the initiative and responsibility of the individual.

"Investigate the health care now available in your community and county to those who cannot afford to pay for this care. Can you, your committee or county Farm Bureau assist with or suggest ways of improving these programs?"

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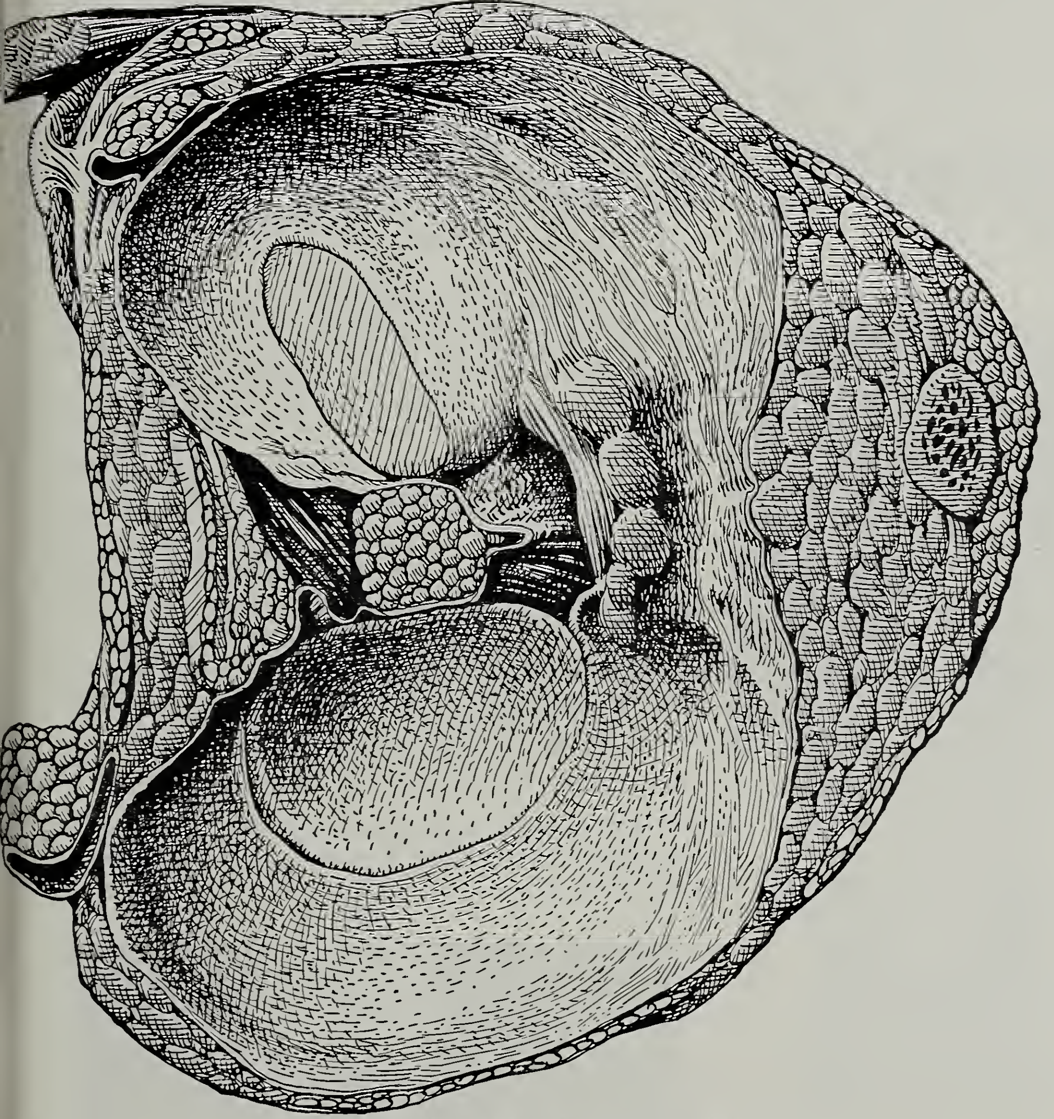

(Knee Joint. Left: distal end of femur; Right: proximal end of tibia)

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# Missouri Academy of General Practice

## Academy Board Meeting

A regular meeting of the Board of Directors of the Missouri Academy of General Practice was held in Jefferson City, Sunday, January 28. Those present included Board members, Officers, Committee Chairmen and Missouri Delegates to the AAGP. Applications for three new active members were unanimously approved. They are Drs. Julian H. Barnett, Kirkwood; Donald H. Giesler, Osceola, and Virgil D. Vandiver, Chillicothe. Dr. Barney Finkel, Chairman of the Publications Committee gave an extensive report on the Academy's publication, *The Missouri Family Doctor.* He said that he continues to receive many commendations on the publication. To date six issues have been published covering a mailing list of approximately 4,200.

A full attendance of the Board was present at the January meeting.

Dr. Carl Siegel, Chairman of the Civil Defense Committee, described and demonstrated the home-care-kit which the USPHS and the Civil Defense Agency are sponsoring. It is hoped that in the near future sufficient numbers of these kits will be available so that instruction classes in their use may be formed over the state. These medical self-help training programs will need the full support of all physicians.

Dr. Doyle McCraw, Chairman of the Education Committee, presented an up-to-date report of progress on the program for the fourteenth Annual Scientific Assembly of the MAGP, to be held at the Chase Hotel, St. Louis, Saturday and Sunday, November 3 and 4, 1962. He invited all to the one day Seminar on Medicine and Surgery at Mount Vernon, February 4, which is sponsored by the Southwest Missouri Academy Chapter and Eli Lilly and Company.

Dr. P. C. Hall, Chairman, Membership Committee, discussed the procedures being used by his committee in efforts to promote membership. He urged each member of the board to make it his business to get at least one new member for the Academy during 1962.

Dr. Walter Gunn, Chairman of the Hospital Committee, reported on the plan under consideration of the University of Missouri School of Medicine establishing a training program at the Kansas City General Hospital.

Dr. Cecil Leitch, Chairman of the Mental Health Committee, reported a program on mental health in Kansas City, comprising five sessions, where Academy members received Category I Credit.

President Roy Pearse presented a number of business items including the six Senate Committee Hearings in Missouri on Aging during December, a communication relating to eye examinations of school children, and the formation of the MAGP Civil Defense Committee.

The Board voted to hold the MAGP Annual Session for 1963 in Kansas City, and for 1964 in St. Louis.

## Education Committee Meets

The Education Committee of the Missouri Academy of General Practice, Dr. Doyle McCraw, Bolivar, Chairman, met at the Missouri

Education committee held meeting.

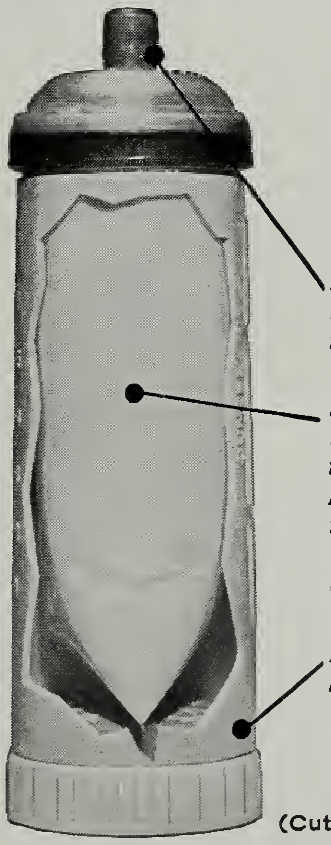
*(Continued on page 282)*

# dramatically reduces spitting up and colic

To the members of the medical profession who recognize the advantages of breast feeding—here's a completely new concept in baby feeding that all doctors will welcome. The new Playtex Nurser. It features a soft, pre-sterilized inner bottle which is disposable, and a broad, non-collapsing nipple which produces a sucking action similar to that in breast feeding.

Because the outside atmospheric air pressure contracts the soft inner bottle, the formula is withdrawn more naturally than with conventional rigid baby bottles. There is no vacuum formation to set up air blocks. The natural-action nipple induces sucking which makes for less air swallowing, and less spitting up—and in so doing, promotes the healthful mouth-jaw exercises the mother's breast provides.

Colicky infants, problem feeders and premature babies especially will benefit from the breast-like action of the new Playtex Nurser. The fact that the bottle is pre-sterilized and disposable will appeal to mothers who do not breast feed their babies. The fact that the Nurser does so closely simulate breast feeding will be similarly important to the health of any baby fed with it.



*New natural action nipple.*

*Soft disposable inner bottle is pre-sterilized. Easily inserted into bottle holder. Use once and throw away.*

*Bottle holder.*

(Cut-out View)

*"Nature's Way"*

# PLAYTEX NURSER

*"The nearest approach to breast feeding"*

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# Woman's Auxiliary

The Woman's Auxiliary wishes to extend a warm invitation to all physicians' wives to join with us for our annual meeting in St. Louis on March 18 to 20. Our hostess group, the St. Louis County Auxiliary under the leadership of Mrs. John W. Deyton, have planned an outstanding program of entertainment.

Mrs. Frederick E. Wade

Mrs. Harlan English, president of the Woman's Auxiliary to the American Medical Association, will be with us for Convention, and will speak at our Monday luncheon. Our charming and gracious national president has a fresh and inspiring approach to our auxiliary program and her theme for the year has been, "Speak Your Beliefs in Deeds"—and it is to this end we have dedicated our efforts this past year.

Our Convention business program affords us the opportunity of reviewing our activities for the past year and learning from others' ideas and programs that will aid us in planning for the future. The reports of our County Auxiliary Presidents are always a convention high-light and Convention provides all of us in the state the opportunity to share in the knowledge of the outstanding programs and achievements made by all the county auxiliaries.

One year ago at Convention Ruth Kelling completed her year of outstanding leadership for our Auxiliary. We know the success of our program this past year was made possible by the wonderful heritage given us by those who earlier had had the responsibilities for guidance and direction, and our thanks and appreciation to all.

At our luncheon on Tuesday it will be my happy privilege to turn the gavel over to Mrs. J. Martyn Schattyn of St. Louis. Our new state president has a sparkle and enthusiasm that radiates to everyone. Venus has been a beloved president of the St. Louis County Auxiliary, and has served the state Auxiliary in many capacities. This past year as our president-elect no job was too large or too small for her to accept, and it was a happy privilege for me to have the opportunity to serve with her able assistance. I know the year ahead will be an outstanding one for the state Auxiliary because of the leadership which Venus will give, and because of the traditional support that every county auxiliary always gives to the state president.

I wish I could express my appreciation to all who have aided our Auxiliary this past year, and made it such a happy and rewarding year for me. However, to be truly honest this would require a republication of our July 15 Roster Edition of MISSOURI MEDICINE, and would not be feasible. However, we must Salute all the dedicated physicians of Missouri, whose daily work affords us the inspiration for our program. Our deep thanks and gratitude to the staff of the Missouri State Medical Association, especially Tom O'Brien and Helen Penn, for all the able assistance they have given. Our thanks to Dr. J. H. Summers, President, for his leadership and guidance, and to our medical advisory committee, Dr. Robert Bassett, Dr. Jordan Kelling, Dr. Ralph Perry, and Dr. Stanley Peterson, a special thanks. The Auxiliary achievements are due basically to the dedicated efforts of our individual members—and to each of you our deepest appreciation.

I wish I could close this year by reporting we have reached all our goals. However, we realize the medical profession today is under greater attack than ever before, so we must go forward with our Auxiliary program with full appreciation and understanding of the perils faced by American medicine.

If we had no challenge, perhaps we would have no incentive, and apathy has always been a cancer in the preservation of the freedom of mankind. I sincerely believe the medical profession, and our Auxiliary, which seeks to serve its ideals, will be stronger and more effective than ever, because of the attacks.

Winston Churchill described England's Finest Hour as the perilous time when his beloved country was under greatest siege. The medical profession is now under siege because of its determination to preserve our American heritage of freedom and responsibility. Medicine is not fighting for itself, it is fighting for America. The time is now! We must now make secure all that which will assure that it will be, "Our Finest Hour."

Volume 59, Number 3—March, 1962

# Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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**MANUEL A. GARCIA-FAURE, M.D.,** *Taunton, Mass.*

# Electroshock Therapy and Trifluoperazine In Chronic Schizophrenia

There is extensive literature on the use of reserpine and phenothiazine tranquilizers combined with electroshock therapy; however, there is still much controversy over the value of these treatments.[1] For example while several investigators have reported successful experiences with a combination of chlorpromazine and electroshock,[2, 3, 4] others do not advocate combining the two because of the possibility of increasing hypotensive effects.[1, 5]

However, the reports to date on the combination with electroshock of one phenothiazine, trifluoperazine, have for the most part been encouraging. There has been little or no effect on the blood pressure observed with trifluoperazine, and when the drug was used with electroshock, additional benefits, over the use of either treatment alone, have been obtained without increasing the hazards involved.[6-10] Also, because trifluoperazine is reported to have a stimulating effect,[7, 11] it appeared to be the drug of choice for a group of hard-core patients who were characterized by apathy and lack of motivation. These patients had been hospitalized for many years and their prognosis for improvement was poor. It was decided to try trifluoperazine in combination with electroshock and this report summarizes findings in a small group.

**The use of trifluoperazine in connection with electroshock in several patients with favorable results is reported.**

**Dr. Garcia-Faure, formerly at the St. Louis State Hospital is now at the Taunton State Hospital, Taunton, Mass.**

## Study Group

Thirteen women from a regular closed ward in the St. Louis State Hospital were selected from a group of patients who had been chronically ill with little hope for rehabilitation. None were considered to be eligible for leave and only two were considered capable of participating in occupational therapy. It seemed unlikely, though, that these two patients could benefit from this therapy in their present withdrawn state.

Patients were selected for their lack of motility and motivation rather than on diagnostic categories. As it turned out, all had schizophrenia; eight paranoid, two catatonic, two hebephrenic and one simple. Their ages ranged from 38 to 64 years. All had been mentally ill for more than 12 years and had been hospitalized from three to 29 years. The average length of hospitalization was 15.9 years. During that time, none had shown adequate response to electroshock treatments or psychopharmacological drugs given alone.

## Method

Prior to the study all patients received complete physical examinations; two were found to have physical conditions which contraindicated electroshock. They and two for whom we were unable to obtain permission for shock treatment formed a "control group" that received only trifluoperazine. Complete blood counts were done before, once during and approximately three months after the study. Patients who were to receive combined therapy had electrocardiograms and spine and chest roentgenograms.

The nine patients who were to receive drug and electroshock were taught in a group about the procedure. The words "sleep electrically induced" or "sleep produced by electricity" were frequently used to refer to the shock treatment. All tolerated the indoctrination well, and group interaction was noticed as some patients began to reassure others who showed fear.

Trifluoperazine was started in all patients with a dosage of 2 mg. daily. Therapy was continued for 33 days; during the first 14, the dosage was increased gradually to a maximum of 12 mg. daily, given in three divided doses. The maximum dosage was maintained for seven days, then decreased over the next four days to 2 mg. daily, and this dosage level was continued for the last seven days. Nine patients received trifluoperazine combined with electroshock; the four others, trifluoperazine alone. A total of five electroshock treatments were given during the 33 day study period. A graph showing the rate of increase and decrease and dosage levels at the time the shock treatments were given is found in figure 1.

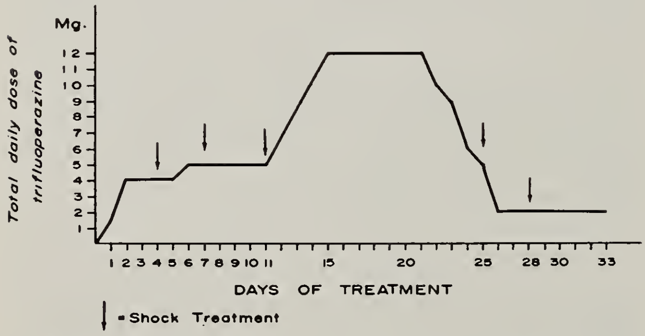

**Fig. 1. Dosage levels at the time shock treatment was given.**

To check the patient's progress, special reports were kept on all; they were observed for possible side effects and evaluated on their behavior, immediate reaction to electroshock, and capacity to work, when appropriate, by the therapist, using observations from the nurses and attendants to supplement his own.

## Results

The response was measured by the patient's willingness and ability to become more active. Improved meant that the patient was integrated enough to be granted full privileges, rehabilitation therapy, convalescent leave, or outside passes, with or without gainful work on the outside. Remotivated meant that the patient showed better verbal communication and was more active in communication, willingness to go to occupational or industrial therapy groups, and participated more in new ward activities. No change meant the patient showed the same degree of refusal passivity, and delusional content as before treatment. Patients were evaluated three times—immediately after the treatment period, three months later and seven months later. One patient was dropped from the study when she developed pneumonia. Table 1 shows the results in the other eight and the four who received trifluoperazine alone for each of the three evaluation times.

Of the six patients who responded in the combination therapy group, one is ready for convalescent leave, four are working in occupational and industrial therapy workshops and the other is doing hall chores as a detail worker.

In the drug group, the patient who was first rated as improved relapsed to a rating of remotivated within four months; the patient who was remotivated at first, relapsed to her pre-drug treatment stage in four months. One of the patients from this group who showed no change was later treated with combined electroshock and trifluoperazine and retained her improved rating for three months after termination of treatment.

## Side Effects

No serious side effects requiring discontinuance of therapy were observed. The most frequent complaints were drowsiness, which sometimes prevented patients from engaging in normal activities, and mild nausea and vomiting which was controlled by the use of Amphogel, p.r.n.

Four patients were reported as "restless and overactive—pacing the floor," typical symptoms of akathisia which has been reported with trifluoperazine. Pseudo-parkinsonism and drooling were observed in two patients, but with the concomitant use of an antiparkinsonism drug, no change in dosage of trifluoperazine was required.

Two patients developed conditions during the study which cannot be related to drug therapy. One had incontinence of urine and feces during the maximum dosage period which disappeared when the dosage of trifluoperazine was reduced during the third week of treatment. Another patient, apparently in her early menopause, had a menstrual period after three months of essential amenorrhea.

Red blood cell counts, hemoglobin and hematocrits remained normal throughout treatment. All differential counts were within normal range prior to treatment and the white blood cell counts remained normal halfway through the study period. In four patients, the segmented neutrophils showed a tendency to increase and lymphocytes to decrease relatively. In the final test, all figures returned to normal limits. At no time was there any evidence of agranulocytosis.

Although some post-shock confusion was observed immediately following treatment, it had cleared by morning. Temperature, pulse and respiration remained within normal limits in both groups during the entire study. Blood pressure readings were taken immediately after shock treatment and later the same evening; in the drug group, blood pressure readings were taken daily. No abnormal changes were observed in either group.

The patient who was dropped from the study was receiving 5 mg. of trifluoperazine daily and had received two electroshocks the last two days before she fell on a wet floor. She was confused and lethargic for several days and become febrile in four days. Rales developed on both lungs, and antibiotic therapy was given. Although her condition worsened to the point of being considered critical, she responded in four days and had an uneventful recovery period. The clinical picture was that of pneumonitis, and her fall and subsequent lethargy could have been related to the incubation period of her lung disease. However, in the past, this patient has shown excessive drowsiness and falls while on chemotherapy alone.

TABLE 1

| | *First Period* | | *Second Period* | | *Third Period* | |
|---|---|---|---|---|---|---|
| | *Combined* | *Drug Alone* | *Combined* | *Drug Alone* | *Combined* | *Drug Alone* |
| **Improved** | 0 | 1 | 1 | 0 | 3 | 0 |
| **Remotivated** | 3 | 1 | 4 | 1 | 3 | 1 |
| **No Change** | 5 | 2 | 3 | 3 | 2 | 3 |

## DISCUSSION

Although this series of patients is small, they can be considered representative of the many backward patients who are mute and withdrawn and have failed to respond, even to the point of participating in ward activities, with previous therapy. The goal was to remotivate and reactivate them, and this was achieved in six of the eight patients who received combined electroshock and trifluoperazine therapy. The gains were maintained and continued during a seven months' follow-up period. A drug group consisting of four patients who received trifluoperazine failed to obtain or maintain a similar order of improvement. Possibly, higher dosages of trifluoperazine or continued therapy might have produced better results in this group.

At no time were untoward effects observed from a combination of electroshock and trifluoperazine. Although there was no control group on electroshock, it appears that this therapy may intensify the effect of trifluoperazine in relieving the patient's anxiety-laden conflict. Likewise, it appears that trifluoperazine may enhance electroshock therapy in that its use in long-standing chronic schizophrenia decreases the number of shock treatments required. In these patients, the therapeutic effects of the combination were maintained for as long as seven months after treatment.

## CONCLUSION

Trifluoperazine may be combined safely with electroshock therapy. Six out of eight chronic schizophrenia patients who received dosages of from 2 to 5 mg. daily along with five electroshock treatments responded favorably and maintained this improvement for seven months. At no time did side effects interfere with therapy.

*(Continued on page 221)*

**LEO T. NEU JR., M.D.,** ***Springfield***

# Leukemia Complicating Pregnancy

## *Two Additional Case Reports*

**Conclusions concerning the complication of pregnancy by leukemia are given and two cases reported substantiating these conclusions.**

**Dr. Neu is with the Smith-Glynn-Callaway Clinic in Springfield.**

THE SITUATION of pregnancy complicated by either acute or chronic leukemia has previously been reported by numerous authors.[1-12] The conclusions drawn by the majority[3-7, 9-12] were as follow:

A. Pregnancy per se has no specific effect on the course of the leukemia.

B. The interruption of pregnancy is of benefit to neither mother nor child. Thus, cesarean section should be reserved for obstetrical indications or for delivering a moribund patient of a viable child.

C. Death from uterine hemorrhage subsequent to delivery is conspicuous by its rarity, even in the presence of thrombocytopenia and/or other manifestations of impaired hemostasis.

D. There is no evidence at present to indicate the existence of a maternal transmission of the leukemic state to the offspring.

Two additional cases are being presented. Their clinical courses are in accordance with the aforesaid principles.

### CASE REPORTS

Case 1. I. W., aged 22, was found to have acute myelogenous leukemia during bone marrow study in October 1959. Initial therapy consisted of Prednisolone and 6 Mercapto-purine. By December 1959, the patient was enjoying a complete hematologic remission. A repeat bone marrow at this time was entirely normal. In January 1960, the patient conceived. Antileukemic therapy at this time was but 7.5 milligrams Prednisolone per day. A leukemic relapse occurred in June 1960. Prednisolone therapy being of no avail, 6 Mercapto-purine was reinstituted in July 1960. The latter drug, along with steroids was continued throughout the remainder of the pregnancy and into the postpartum period; although from July onward, the patient's leukemia was never well controlled. The patient delivered in August 1960, one month before term. The delivery was vaginal without any unusual blood loss. A complete blood count at term revealed but 8,000 platelets by the indirect method. Multiple ecchymosis and petechiae were present. The newborn infant was viable, normal in all respects, and he remains so even to this date, approximately one and one half years later. The childbirth heralded no change in the course of the patient's leukemia. In spite of 6 Mercapto-purine, steroids and transfusions, it remained uncontrollable and the patient expired on January 20, 1961, of a cerebral hemorrhage.

Case 2. B. L., aged 37, was diagnosed as having chronic myelogenous leukemia in 1957 at the age of 32. Initial therapy consisted of splenic radiation. Subsequent to this, Myleran was employed. The patient obtained an excellent response, and with the return of normal blood counts, a maintenance dosage of 1 milligram of Myleran twice weekly was given. On this dosage the patient conceived. Five months later, due to a change in locale, the patient was first seen by me. A complete blood count was normal and Myleran was discontinued. At this time the patient was five months pregnant. The remainder of the pregnancy was uneventful. On January 12, 1961, the patient delivered a male child weighing 7 pounds, 11 ounces. Delivery was vaginal with no undue bleeding; a complete blood count at this time was unremarkable. The child was normal in all respects and has remained so to this date, 11 months later. Childbirth resulted in no alteration of the leukemic state. In June 1961, a leukemic relapse with a white blood count increase to 94,000 necessitated resumption of Myleran therapy. Once again, the patient remissed and on October 6, 1961, with a white blood count of 7,900, the Myleran was again discontinued. To this date, the patient is still in total remission.

### DISCUSSION

The course of the leukemic process in these two cases reflects no variations referable to either the pregnancy or delivery.

Both patients produced normal viable infants. They are well now, aged 16 months and 11 months.

Obstetrically, these patients were managed according to principles applicable to any pregnancy. In addition, the obstetrician was alerted to the possibility of an emergency cesarean section. In the instance of Case 1 (I. W.), blood donors capable of supplying platelet rich fresh blood were recruited. Yet, vaginal delivery in this patient with multiple ecchymosis, petechiae, and profound thrombocytopenia produced no hemorrhage. This experience reflects that of Harris[6] who in a literature review of 72 pregnant chronic leukemic patients and 42 pregnant acute leukemic patients found but three who bled fatally with either cesarean section, vaginal delivery or abortion. Unfortunately, fibrinogen levels were not obtained as recommended by Frenkel and Meyers.[12]

In regard to medical management, steroid therapy immediately postpartum was given only to Case 1 (I. W.). The rationale was that the steroids employed during the pregnancy in addition to being of beneficial effect to the leukemic management could have resulted in adrenal atrophy thus necessitating extrogenous steroids during the stressful period of delivery. Case 2 (B. L.) exhibited no need for steroid therapy; neither did either infant.

As to specific antimetabolite therapy, it is of interest that Case 2 (B. L.) conceived while receiving Myleran. Frenkel and Meyers[12] believe that antimetabolites may be employed as indicated after the first trimester. Others have reported similar therapy without ill effects.[8, 9, 13] Yet, this opinion is by no means universal,[14, 15, 16] although Myleran in the therapy of pregnant chronic leukemic patients is more readily accepted than the antimetabolites employed in the treatment of acute leukemic patients.

## Summary

Two cases of pregnancy respectively associated with a chronic leukemia and an acute leukemia are reported. Their management and outcome are discussed in accordance with current medical concepts.

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# ELECTROSHOCK THERAPY

(Continued from page 219)

Four patients who received trifluoperazine alone failed to obtain similar benefits.

## Acknowledgement

I wish to thank everyone cooperating in this work, especially Dr. Anton Heusler, Chief of the Research Division, for his keen interest and suggestions and Mrs. Earleen Morris, R.N., Instructor in Nursing, for her conscientious assistance to the patients.

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SOLOMON GARB, M.D., *Columbia*

# Thermonuclear Survival

## *Special Article*

### IMPORTANT ASPECTS OF NUCLEAR RADIATION

There are minimum aspects which must be understood to plan intelligently for personal and family survival.

There are several types of atomic radiation, but all have at least one important thing in common. They cannot be seen, heard, felt or in any way sensed by human beings until the damage has been done. Special instruments are required to detect them.

### TYPES OF RADIATION

The types of radiation with which we are concerned are alpha particles, beta particles, gamma rays and neutrons.

*Alpha Particles.* Alpha particles are identical to the nuclei of helium atoms. They have a relatively high mass and charge and poor powers of penetration. Probably a few inches of air, a layer of clothing, or even the outer horny layer of skin can stop them. Therefore, alpha particles from outside the body itself present no hazard. However, if enough material which emits alpha particles should be swallowed or inhaled, the particles could cause serious internal damage and sometimes even death. The ordinary Geiger counters and radiation survey meters do not pick up alpha particles. Special instruments are needed for this purpose.

*Beta Particles.* Beta particles are the same as electrons. They are somewhat more penetrating than alpha particles. They cannot cause damage at a distance, but if they come from materials on the skin they can cause serious burns. Like alpha particles, they are most dangerous if emitted internally from radioactive material which has been swallowed or inhaled. Some Geiger counters have so-called "beta windows" which enable them to measure beta activity.

*Gamma Rays.* Gamma rays are related to x-rays but are much more penetrating. They can travel for miles through the air and through several feet of most materials. They can kill even if the material emitting them is some distance away. They can be picked up and counted by counters and various radiation survey meters.

Gamma rays are so much more powerful and more penetrating than the x-rays with which doctors are familiar that one must guard against mistaken comparisons. The ordinary lead apron which is used by physicians to protect against x-rays during diagnostic procedures offers practically no measurable protection against fallout gamma rays. Indeed, to get a protection factor of even 2, from lead, requires a thickness of about a third of an inch, and the minimum protection factor needed to have a good chance of survival is 100. For the same reason, special suits to protect personnel against radioactive fallout are not practical. They can keep the particles from getting on the skin. However, unless such suits contained a thickness of about 2 inches of lead, they could not stop enough of the gamma rays from penetrating.

*Neutrons.* Neutrons are particles found in atomic nuclei and have no electric charge. Because of this, they can penetrate many materials. When they hit nuclei of certain atoms they can knock out other neutrons just as a billiard ball can transmit its energy to another billiard ball. As a result, even a thick layer of steel may not give good protection against neutrons. However, damp earth and concrete, because of their content of water, will protect. The exact mechanism is complex and need not be described here. It is discussed in detail by Glasstone. Neutrons are

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**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine,* and are published with permission of that journal.**

**Dr. Garb is secretary of Medical Education for national Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.**

**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

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not picked up by ordinary radiation detection instruments.

## SOME COMMONLY USED MEASURING UNITS

*The Roentgen and the Milliroentgen.* A commonly used measuring unit is the roentgen, often abbreviated to r. We need not define the roentgen here. In many cases a smaller unit than the roentgen is needed, and the milliroentgen, or Milli-r, is used. It is 1/1000 of a roentgen. At times other terms are used. They include, rep, rad and rem. It is not important to consider the differences in meaning between these, since, for practical civil defense purposes, the terms roentgen, rep, rad and rem refer to the same amount of gamma radiation. However, these terms are not interchangeable, when discussing alpha particles, beta particles or neutrons. When a radioactive material emits radiation, it changes, or "decays" into another material.

The time taken to decay to one half of the original mass is called the half-life. If a material has a half-life of one day, only one half of it will remain at the end of the first day, one fourth at the end of the second day, one eighth at the end of the third day, one sixteenth at the end of the fourth day and so forth. Half-lives may vary from about one millionth of a second to thousands of years. Fortunately, in most cases, the elements which produce large amounts of radiation have a short half-life so that they only present a serious threat for a relatively short time.

For practical civil defense purposes, it is sufficient to remember that the radioactivity from fallout decays to one tenth of its previous level with every sevenfold increase in elapsed time. The base is customarily the radiation level at one hour after explosion. Thus, if the radiation level at one hour is at the rate of 1,000 r per hour its level at later times will be as follows:

| *Elapsed Time* | *Radiation Rate (r Per Hour)* |
|---|---|
| 1 hour | 1,000 |
| 7 hours | 100 |
| 49 hours (2 days) | 10 |
| 343 hours (2 weeks) | 1 |
| 14 weeks | 0.1 |

This emphasizes the importance of protection during the first two days.

The total life of a ray on earth is a small fraction of a second. On the other hand, a radioactive particle may remain radioactive for appreciable periods of time. The distinction between a ray and a radioactive particle must be kept in mind clearly at all times. A radioactive particle can be thought of as being a small x-ray machine. The radioactive particle itself does no damage—the rays which it gives off do the damage. It is relatively simple to keep radioactive particles away from us. Any measure which will keep ordinary sand away will keep more than 99 per cent of radioactive particles away. However, it is much more difficult to keep the rays away since they have an extraordinary penetrating power.

Present knowledge of the dangerous effects of radiation is incomplete but should be fairly reliable as a general guide.

A total body dosage of less than 50 r will probably have little noticeable effect. With a dose of between 50 and 250 r there will be some radiation sickness but no deaths. As the dose increases beyond 250 r deaths will increase in frequency, and at about 450 r, half of those exposed will die within one month. At about 750 r, almost all those exposed will die.

Those who receive doses of more than 200 r but survive will be sick and weak for long periods of time. Although an acute dose of radiation is somewhat more dangerous than prolonged chronic exposure, all exposures are cumulative for a lifetime. Thus, if a person received 30 r each week to his entire body, he would probably die within one and a half to two years.

Protection against external radiation can be accomplished by interposing sufficient material between the radioactive source and the person. In general, the ability of materials to reduce the passage of gamma rays depends on the mass of the material. The heavier the material, the better the protection. Usually, the degree of protection for a particular type of ray is given in terms of a half-thickness. For example, if the half-thickness of a material for fallout gamma rays is 1 inch, then a 1-inch thickness reduces the radiation to one half, 2 inches to one fourth, 3 inches to one eighth, 4 inches to one sixteenth, 5 inches to one thirty-secondth and so forth (fig. 1). The half-thickness of materials suitable for bomb shelters is given in table 3.

In general, one may assume that a pound of any material will give approximately the same protection from gamma rays as a pound of any other material. Although not strictly accurate, this approximation is close enough for all practical purposes.

Protection against radiation from inhaled or

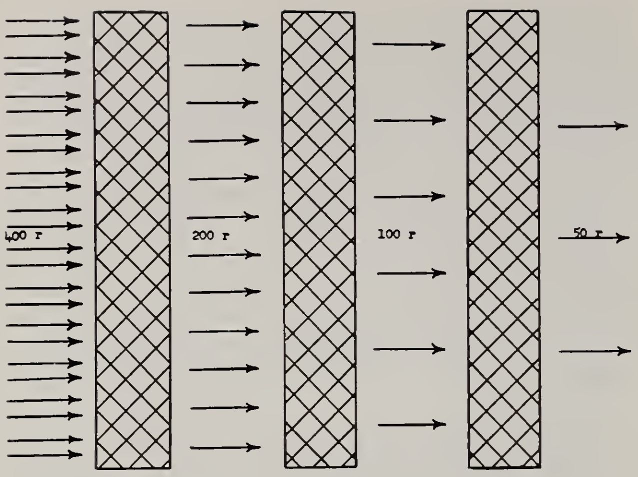


Fig. 1. Important aspects of nuclear radiation.

swallowed radioactive material can be obtained only by keeping such inhalation or swallowing to an absolute minimum.

In addition to the direct hazards of radiation there is the indirect hazard of injuring the germ cells so that future generations will bear congenital defects. Here knowledge is extremely limited. It is believed that the risk is directly related to the amount of exposure, and that even amounts of radiation which do not cause illness can injure generations yet unborn. For this reason, it is advisable to avoid exposures as much as possible, even if the risk of death has passed.

TABLE 3

APPROXIMATE THICKNESS IN INCHES OF MATERIALS NEEDED TO REDUCE THE AMOUNT OF RADIOACTIVITY FROM FALLOUT

| *Substance* | *Reduction to One Half* | *Reduction to One Thousandth* |
|---|---|---|
| Lead | 0.35 | 2.5 |
| Steel | 0.7 | 6.7 |
| Concrete | 2.2 | 23 |
| Packed Earth | 3.3 | 36 |
| Crushed Rock | 3.3 | 36 |
| Water | 4.8 | 50 |
| Full Cartons of Canned Food | 7.0 | 75 |
| Wood | 8.8 | 90 |

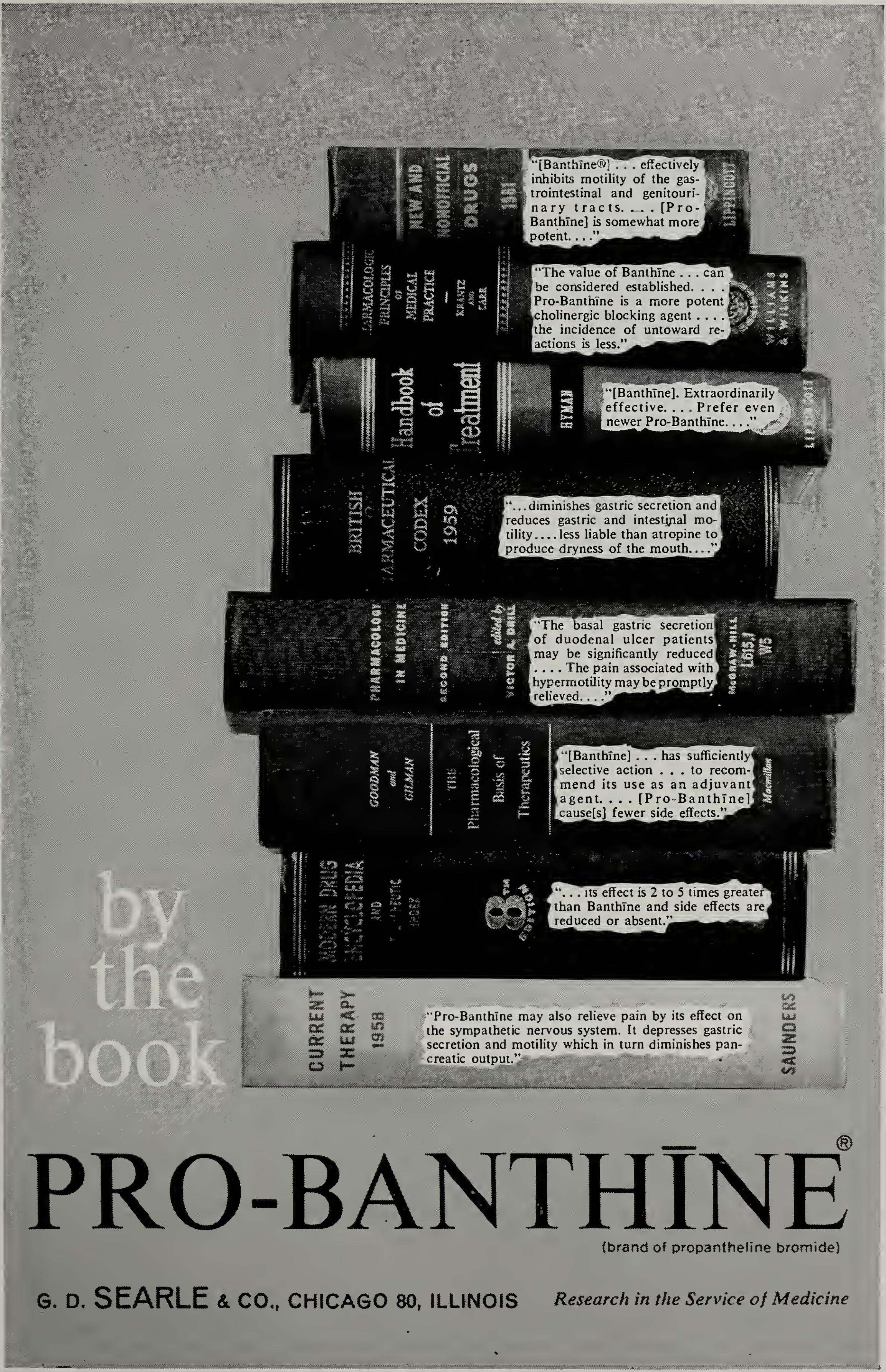
---

## MISSOURI STATE SURGICAL SOCIETY TO MEET AT TIME OF ANNUAL SESSION

The Missouri State Surgical Society will hold its fifth annual meeting on Monday evening, March 19, 1962. The meeting will be held at the Starlight Roof, Chase-Park Plaza Hotel, with a social hour at 6:30 p.m. followed by dinner at 7:00 p.m.

The distinguished guest speaker will be H. William Scott Jr., M.D., Professor and Chairman, Surgery Department, Vanderbilt University Hospital, Nashville, Tenn. His subject will be "An Appraisal of Vagotomy and Antral Resection in Surgical Treatment of Duodenal Ulcer."

Nonmembers of the Society interested in attending should contact Eugene M. Bricker, M.D., 100 N. Euclid Ave., St. Louis 8. Admission will be by reservation only.



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J. H. Summers, M.D.

# President's Message

Problems? There probably has never been a time when the physician did not face problems besides those met in the daily practice of his profession. And certainly today is no exception.

And one of the best ways to resolve problems is to get together and "talk it over." That is the opportunity that will be offered this month at the 104th Annual Session of the Association. A good many things will be "talked over" in the House of Delegates and in the reference committees. Both are open to all members of the Association and each member has a vital part to play, and an obligation to his profession, and himself, to take part in the proceedings.

Also, bring your practice problems. The scientific program is of unusual breadth and scope and geared to the everyday practice of medicine.

Remember, March 18, 19, 20 and 21, Hotel Chase, St. Louis.

J. H. Summers, M.D.

# EDITORIALS

## CREDO

The following editorial signed by John L. Horner, M.D., St. Louis, outgoing editor of *St. Louis Medicine*, appeared in the January 10 issue of that publication and is reprinted with permission.

"With this issue the term of the current editorial board expires. Two weeks hence a new editor will begin contributing his thoughts about the role of the physician in the social structure, community affairs and politics of the day. It could be that these ideas will be quite different from those which have appeared in this column during the past year.

"The medical profession seems to be one of the few remaining occupations standing for individual initiative and individual responsibility. There is much talk today about a trend in this country to the political 'Right.' Gearing the increasing clamor drummed up by the socialists for medical care paid for by Social Security it is difficult to believe that the Rightists represent anything as definite as a trend. Personally, and pessimistically, we believe physicians will find themselves more and more alone if they stand for individual responsibility as against federal government coddling, yet stand we must.

"How can we sell these strongly rooted beliefs to the public? We must, of course, continue to point out the superior accomplishments of medical practice under a free society as compared with progress under a socialistic yoke. Basically, however, we will convince our patients only if they believe in us, personally. And they will believe in us, personally, only if they are convinced we are unselfishly devoted to their welfare. They must know that we will not abuse our freedom, and will not permit our colleagues to do so. All our talk, all our public relations programs, can succeed only if this attitude is genuine, and is recognized as such by the public.

"Because I am confident that the great majority of doctors embrace this credo, I am confident that the next editorial board will stand for the principle that the unique privileges of the physician demand equally unique individual responsibility."

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## HEALTH INSURANCE BENEFITS RISE

Health insurance benefit payments by all insuring organizations averaged an estimated $17.3 million a day during 1961, the Health Insurance Institute reported recently.

This represented an increase of some $1.8 million a day over the average daily benefit payments of $15.5 million made during 1960 by all health insurers. It also is an increase of $7.4 million a day over the 1956 average benefit of $9.9 million a day, and a rise of $12.9 million a day over the 1951 average daily benefit of $4.4 million.

Health insurance benefit payments during 1961 by all insurers were estimated by the Institute at $6.3 billion, an increase of 11 per cent over the $5,688,000,000 paid during 1960.

The Institute said that insurance companies accounted for $3.4 billion of the 1961 benefits while all other insurers, including Blue Cross-Blue Shield and the independent plans paid out some $2.9 billion. In 1960, insurance companies paid out $3,069,000,000 in benefits while other insuring groups paid out $2,619,000,000.

Of the insurance company benefit total for 1961, the Institute estimated that $2.5 billion went to help policyholders pay hospital, surgical and medical bills. The remaining nearly $900 million was paid to persons with loss of income insurance to help replace income cut off as a result of injury or illness.

Loss of income benefit payments by insurance companies in 1961 are estimated to have increased slightly over 1960, while benefits for hospital, surgical and medical bills increased some $300 million.

In terms of persons protected by some form of health insurance, the Institute estimated that at the end of 1961, some 136 million persons had hospital insurance, 124 million had surgical insurance, 91 million had regular medical insurance, 35 million had major medical insurance and 43 million had loss of income insurance.

# Ramblings of the Field Secretary

It was cold outside. However, those brave souls who challenged the weather and attended the President's Installation ceremonies of the St. Louis Medical Society on Tuesday night, January 9, were treated to the enjoyable customary St. Louis Medical Society Installation activities.

Attending the St. Louis Medical Society installation were Drs. Macnish, Wulff, Summers, Davis and Sherwin.

The evening program began at 8:30 p.m. in the Society's auditorium where all present were privileged to view the installation of new officers and new councilors of the Society for the year 1962. Brief remarks were made by the outgoing president, Dr. Don C. Weir, referring to a number of activities that the Society had carried on during the last year. He then turned over the gavel to the incoming president, Dr. James M. Macnish, who as his first official duty, presented Dr. Weir with a suitable plaque representing appreciation of the Society for his year of service as president.

The receiving line greeted friends.

In his inaugural remarks, Dr. Macnish in discussing some major modern problems stressed the important part medical schools play. He pointed out that the medical school should be aware constantly of its membership in the university of which it is a part and of responsibility to the community which it helps to serve. However, he said, the school must keep paramount its primary objective, educating physicians to care for the sick. Also, he said the medical school should take its part in helping its students to become informed and responsible citizens for medicine is increasingly becoming a social science.

Executive Secretary Smith carved the turkey.

The lighter side of the evening festivities took place in the Society's banquet hall. Here guests passed through the reception line of officers and their wives and then participated in refreshments of both liquid and solid nature. An orchestra played just the right type of music for the oc-

Incoming President Davis and wife and outgoing President Wulff and wife agreeably posed.

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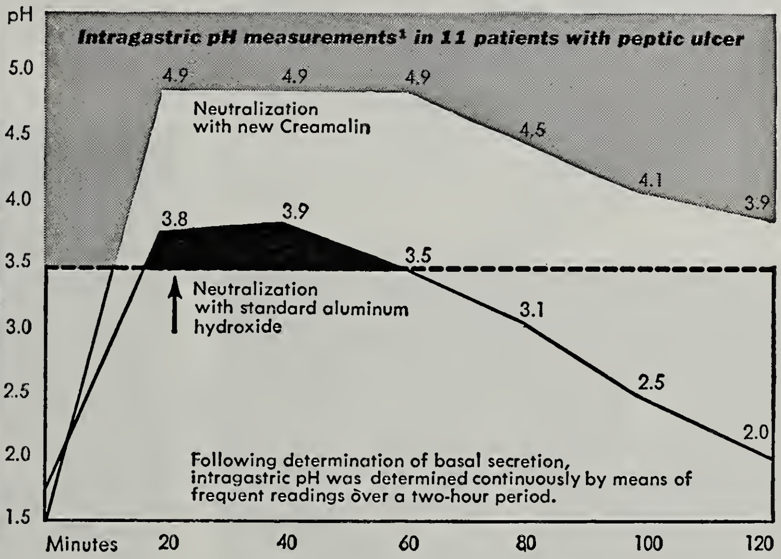
pH
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
Intragastric pH measurements[1] in 11 patients with peptic ulcer
4.9
4.9
4.9
4.5
4.1
3.9
Neutralization with new Creamalin
3.8
3.9
3.5
3.1
2.5
2.0
Neutralization with standard aluminum hydroxide
Following determination of basal secretion, intragastric pH was determined continuously by means of frequent readings over a two-hour period.
Minutes
20
40
60
80
100
120

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*References:* **1.** Schwartz, I. R.: *Current Therap. Res.* 3:29, Feb., 1961. **2.** Beekman, S. M.: *J. Am. Pharm. A.* (Scient. Ed.) 49:191, April, 1960. **3.** Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A.* (Scient. Ed.) 48:381, July, 1959. **4.** Data in the files of the Department of Medical Research, Winthrop Laboratories. **5.** Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A.* (Scient. Ed.) 48:384, July, 1959.

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casion and as the evening wore on more and more timid souls took advantage of the opportunity for dancing.

In addition to members of the St. Louis Medical Society and the wives who were present, a number of guests were on hand. Among them were: Dr. J. H. Summers, Lebanon, President of the Missouri State Medical Association; Dr. George J. L. Wulff, Jr., President, St. Louis County Medical Society, and Dr. Edgar W. Davis, President-Elect, St. Louis County Medical Society. New officers of the St. Louis Medical Society for the year 1962 are: James M. Macnish, president; Charles S. Sherwin, president-elect; Walter T. Gunn, vice president; Edward D. Kinsella, secretary, and Oliver E. Tjoflat, treasurer.

Norwood Hills Country Club was truly a winter playground on Wednesday night, January 10, when the St. Louis County Medical Society held its 1962 Installation Banquet there. The excellent facilities of the club for occasions of this nature partly cancelled out the cold breezes and slippery streets outside. A roaring fire in the fireplace coupled with other attractive features of a social hour initiated the evening festivities in proper fashion.

**President Davis presented a gift to Dr. and Mrs. Wulff.**

The formal part of the evening program was called to order by Dr. George J. L. Wulff, outgoing president. Following his welcoming remarks, guests were introduced. Dr. Wulff in his usual succinct manner reviewed activities of the St. Louis County Society under his year of administration. He then said, "I now happily turn over the gavel to my successor and good friend, Dr. Edgar W. Davis."

The new president, Dr. Davis, expressed the appreciation of the Society to Dr. Wulff for his fine service during the past year as head of the Society. To make the appreciation of the Society more concrete, he presented to Dr. and Mrs. Wulff, an appropriate gift which undoubtedly will be cherished by them for years to come. In his inaugural address, Dr. Davis stressed that efforts would be made to continue the many effective projects now being carried on by the St. Louis County Society. He pointed out that he would like to second all of the remarks made by Dr. Macnish, President of St. Louis City Society, which he made the preceding night in his inaugural address. Dr. Macnish being present could be seen to give his approval to the second.

**A table of youngsters, Mrs. and Dr. Lord, Mrs. and Dr. Miller, and Mrs. and Dr. O'Keefe.**

Among the special guests at this occasion were Dr. and Mrs. J. H. Summers, President of the Missouri State Medical Association, who following the evening festivities, motored back to Lebanon.

The number present on this chilly January 10 evening may not have been as large as on past occasions with higher temperatures, but it seemed that the friendly conversations, greetings and fellowship of those present made up for a lack of numbers.

The Society's 1962 officers are: Edgar W. Davis, president; Robert A. Mayer, president-elect; John S. Skinner, vice president; James R. Nakada, secretary, and C. Read Boles, treasurer.

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# News—Personal and Professional

Chairman of the council of the Southern Medical Association has announced that **Daniel L. Sexton**, M.D., St. Louis, has been named president-elect of the organization. He will be installed at the meeting in Miami Beach, Nov. 12 to 15, 1962.

Speaking on "The Non-Muscular Effects of Cerebral Vascular Accidents," **Edward Weiford**, M.D., Kansas City, addressed the Western Missouri Chapter of the American Physical Therapy Association on January 9.

Among guest speakers at a postgraduate course at the Ochsner Foundation Hospital, New Orleans, on January 15 to 18 was **Carl V. Moore**, M.D., St. Louis.

At a recent meeting of the medical staff of the Independence Sanitarium and Hospital, **E. L. Saunders**, M.D., was elected president; S. **F. Cockerell**, M.D., president-elect; **E. H. Dorsch**, M.D., secretary-treasurer; **R. S. Mosser**, M.D., head of medicine, and **H. S. Jonas Jr.**, M.D., head of surgery.

New officers of the medical staff of Christian Hospital, St. Louis, are **Oliver E. Tjoflat**, M.D., president; **Sylvester E. Pawol**, M.D., vice president, and **Charles K. Holbrook**, M.D., secretary-treasurer. Executive committee members are Drs. **J. M. Estes**, **J. E. Jensen**, **H. S. Pruett** and **N. S. Vitale.**

A recently appointed member of the research committee of the American Rhinologic Society is **Pat A. Barelli**, M.D., Kansas City.

"Tuberculosis and Public Health Facilities for Its Control" was the subject of a talk given by **Florence E. MacInnis**, M.D., Kansas City, to the Gateway Branch of the American Business Women's Association in Kansas City recently.

The West Ridge School P. T. A. recently heard a talk by **David F. Eubank**, M.D., Kansas City, on "Childhood Diseases."

A lecture and clinic on "Unusual Electrocardiographic Patterns in Myocardial Infarctions" was presented in December by **Michael Bernreiter**, M.D., Kansas City, at the Veterans Administration Hospital in Excelsior Springs.

Recently installed officers of the Alexian Brothers Hospital, St. Louis, are **Vernon E. Michael**, M.D., president; **Charles B. Ladd**, M.D., vice president, and **Albert M. Repetto**, M.D., secretary-treasurer.

At a seminar on "Anatomy of Damages" held on February 1 by the Jackson County Medical Society and the Kansas City Bar Association, the following physicians took part: Drs. **John F. Bowser**, **Herbert Hamel**, **Edward Weiford**, **Charles B. Wheeler Jr.** and **Dewey K. Zeigler.**

At a January meeting of the Kansas City Academy of Medicine, **Don C. Weir**, M.D., St. Louis, was the speaker.

New head of the St. Louis State School and Hospital is **Leopold Hofstatter**, M.D., St. Louis.

The American Society for Surgery of the Hand recently elected **F. X. Paletta**, M.D., St. Louis, to membership.

A modernly equipped room was dedicated in the Woodland Hospital, Moberly, as the Dr. Hawkins Memorial Room, in honor of the late G. W. Hawkins, M.D., Salisbury.

New president of the medical staff at St. Francis Hospital, Washington, is **Paul A. Brenner**, M.D., Owensville. **J. B. Shea**, M.D., Gerald, is vice president of the staff, and **J. B. Ryan**, M.D., Washington, is secretary-treasurer.

At its recent meeting in Chicago, **Wilfred E. Wooldridge**, M.D., Springfield, was chosen president-elect of the Dermatologic Radiation Society.

At a Shrine ceremonial held in Springfield, the

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Abou Adhem Civic Service Award was presented to **T. W. Carroll**, M.D., Lamar.

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The Missouri Baptist Hospital, St. Louis, has elected **Edward M. Cannon**, M.D., as chief of staff. **Roy A. Walther**, M.D., was elected associate chief of staff, and **James R. Meador**, M.D., was chosen secretary.

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The medical staff of St. Vincent's Hospital, St. Louis, has chosen **Murrey E. Finn**, M.D., as president for 1962. Other officers elected were **S. R. Banet**, M.D., vice president, and **Robert D. Brookes**, M.D., secretary.

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"The Medical Complications of Pregnancy" will be the subject of a presentation by **Harold L. Gainey**, M.D., Kansas City, at the annual clinical conference of the Chicago Medical Society on March 2.

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The Medical Secretaries and Assistants Society of Kansas City had as their January speaker **Ralph Casford**, M.D., Kansas City, who spoke on "Sugar Diabetes."

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The staff of St. Joseph's Hospital, St. Charles, recently elected **Walter C. Gray**, M.D., St. Louis, as president of the staff. **O. W. Towers**, M.D., St. Charles, was elected vice president, and **V. Muenster**, M.D., St. Charles, was elected secretary.

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A recent appointment to the editorial board of the *Archives of Pediatrics* is **Chester P. Lynxwiler**, M.D., St. Louis.

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Attending the President's Conference on Occupational Safety in Washington, D. C., March 6 to 8, will be **Richard A. Sutter**, M.D., St. Louis.

---

"Medicine and the Government" was the subject of a talk presented by **Mark M. Marks**, M.D., Kansas City, before the Independence Kiwanis Club in February.

## NEW MEMBERS

**Peter A. Diemer**, M.D., 710 Wingan Lane, St. Louis, has become a member of St. Louis Medical Society. Dr. Diemer is a native of Pennsylvania, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1959.

**Martel Dominique**, M.D., 7344 Princeton St., St. Louis, has become a member of St. Louis Medical Society. Dr. Dominique is a native of New Hampshire, received his preliminary education at Montreal University, and his M.D. degree at Laval University in Quebec in 1943.

**Andrew J. Gay**, M.D., 7330 Pershing Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Gay is a native of Alabama, received his preliminary education at the University of Alabama and his M.D. degree at Alabama University in 1955.

**Gerald F. Geisler**, M.D., 1325 South Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Geisler is a native of Texas, received his preliminary education at Notre Dame, and his M.D. degree at St. Louis University in 1961.

**Harry L. Heidenreich**, M.D., 3750 Gravois Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Heidenreich is a native of Missouri, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1927.

**William A. Kamm**, M.D., 1600 South 14th St., St. Louis, has become a member of St. Louis Medical Society. Dr. Kamm is a native of Pennsylvania, received his preliminary education at Miami University, Oxford University, and Southern Illinois University, and his M.D. degree at the University of Illinois in 1958.

**Robert E. Kuhlman**, M.D., 6045 Lansdowne Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Kuhlman is a native of Missouri, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1956.

**Michael S. Pozsgay**, M.D., 300 Porchester St., St. Louis, has become a member of St. Louis Medical Society. Dr. Pozsgay is a native of Illinois, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1958.

**J. C. Blanton**, M.D., 1012 N. Main St., Sikeston, has become a member of Semo County Medical Society. Dr. Blanton is a native of Missouri, received his preliminary education at St. Louis

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University, and his M.D. degree at St. Louis University in 1955.

**William W. Bradley**, M.D., Farber, has become a member of Audrain County Medical Society. Dr. Bradley is a native of Missouri, received his preliminary education at Westminster College, and his M.D. degree at the University of Missouri in 1960.

**David J. Buddrus**, M.D., 7721 State Line, Kansas City, has become a member of Jackson County Medical Society. Dr. Buddrus is a native of Oklahoma, received his preliminary education at Creighton University, and his M.D. degree at Creighton University in 1947.

**Robert A. Eastwood**, M.D., Forsyth, has become a member of Ozarks County Medical Society. Dr. Eastwood is a native of Oklahoma, received his preliminary education at Memphis State University, and his M.D. degree at the University of Tennessee in 1952.

**Charles W. Gaskins**, M.D., Fredericktown, has become a member of Mineral Area County Medical Society. Dr. Gaskins is a native of North Carolina, received his preliminary education at Duke University, and his M.D. degree at the University of Tennessee in 1932.

**Paul W. Hayes**, M.D., 902 Edmond St., St. Joseph, has become a member of Buchanan County Medical Society. Dr. Hayes is a native of Missouri, received his preliminary education at the University of Nebraska, and his M.D. degree at the University of Nebraska in 1936.

**I. W. Kimball**, M.D., 7306 N.W. Spring St., Parkville, has become a member of Platte County Medical Society. Dr. Kimball is a native of Missouri, received his preliminary education at Drury College, and his M.D. degree at St. Louis University in 1954.

**Edmund W. Kline**, M.D., Kirkpatrick Building, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Kline is a native of New Jersey, received his preliminary education at Franklin & Marshall College, and his M.D. degree at Johns Hopkins University in 1955.

**Richard E. May**, M.D., Division of Health, Jefferson City, has become a member of Cole County Medical Society. Dr. May is a native of Ohio, received his preliminary education at Kent State University, and his M.D. degree at McGill University in 1957.

**George W. Nash**, M.D., Professional Building, Kansas City, has become a member of Jackson County Medical Society. Dr. Nash is a native of Kansas, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1955.

**Charles H. Pope Jr.**, M.D., 10901 Winner Road, Independence, has become a member of Jackson County Medical Society. Dr. Pope is a native of Missouri, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1954.

**Charles A. Spears**, M.D., Branson, has become a member of Ozarks County Medical Society. Dr. Spears is a native of Oklahoma, received his preliminary education at the University of Arkansas, and his M.D. degree at the University of Arkansas in 1958.

**William J. Super**, M.D., 7th & Jule Sts., St. Joseph, has become a member of Buchanan County Medical Society. Dr. Super is a native of Iowa, received his preliminary education at St. Ambrose University, and his M.D. degree at St. Louis University in 1955.

**Anthony Ziegler Jr.**, Vandalia, has become a member of Audrain County Medical Society. Dr. Ziegler is a native of Louisiana, received his preliminary education at University of Louisiana, and his M.D. degree at Tulane University in 1958.

## DEATHS

**Bland, Warren, W.**, M.D., Vandalia, a graduate of Washington University, 1899; member of Audrain County Medical Society; aged 86; died November 30, 1961.

**Green, Robert S.**, M.D., 117 Oak St., Kennett, a graduate of the University of Tennessee, 1946; member of Dunklin County Medical Society; aged 39; died December 14, 1961.

**Hoefer, Walter H. V.**, M.D., 1700 Tower Grove Ave., St. Louis, a graduate of St. Louis University, 1932; member of St. Louis Medical Society; aged 56; died December 23, 1961.

**Major, Hermon S.**, M.D., 3100 Euclid Ave., Kansas City, a graduate of Kansas City Medical College, 1905; member of Jackson County Medical Society; aged 85; died December 13, 1961.

**Norman, Robert M.**, M.D., Ava, a graduate of Barnes Medical College, 1903; member of South Central County Medical Society; aged 83; died November 30, 1961.

**Pickrell, Claude D.**, M.D., 329 North Central St., St. Louis, a graduate of Washington University, 1910; member of St. Louis Medical Society; aged 76; died December 18, 1961.

**Singleton, J. Milton**, M.D., 315 Nichols Road, Kansas City, a graduate of Tulane University, 1917; member of Jackson County Medical Society; aged 68; died November 29, 1961.

**Zeitler, Walter A.**, M.D., 2554 Hord Ave., St. Louis, a graduate of St. Louis College of Physicians & Surgeons, 1921; member of St. Louis County Medical Society; aged 76; died December 16, 1961.

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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Buchanan County Medical Society

One hundred twenty-three doctors, wives and guests attended the January 10 meeting of the Buchanan County Medical Society at Hotel Robidoux, St. Joseph. Dr. John R. Forgrave, president, presided.

The speaker was Mr. Crosby Kemper Jr., Kansas City, Republican candidate for U. S. Senator. The young bank executive gave his views of socialized medicine and the present trend toward socialism in this country. He lashed out at the federal administration's proposals for placing medical care for the aged under social security and presented his own ideas on the matter. Mr. Kemper suggested that senior citizens be permitted to do for themselves and not be made wards of the federal government and that they be allowed to retain their individualism. He would accomplish this by a three-fold approach, raising the present ceiling of $1,200 on earnings for those under social security to what ever they could earn; permitting everyone, regardless of age, to deduct all medical expense from income tax; and to implement Kerr-Mills legislation in Missouri to provide for the needy and near needy. The speaker was introduced by Dr. John N. Martin.

Herbert C. Senne, M.D., *Secretary*

### Grand River Medical Society

Those who braved the snow and cold weather January 11 to attend the monthly meeting of the Grand River Medical Society at the Strand Hotel in Chillicothe were rewarded with a fine chicken dinner, an extended social hour and a surprise program.

The anticipated speaker, H. B. Overesch, M.D., of Kansas City, was unable to attend because of illness in his family. In lieu of a scientific program a film depicting St. Louis Cardinal football was shown. Meanwhile the Auxiliary conducted a white elephant sale for the benefit of its treasury.

There was no new business to be considered and the meeting was adjourned early.

Guests present were Mr. Pickell, Administrator of the Pershing Memorial Hospital in Brookfield, representatives of the Upjohn, Breon and Lilly drug manufacturers and Don Dodson, University of Missouri Medical student who is serving a preceptorship with Drs. Smith, Gary and Horner.

Frank R. Daley, M.D., *Secretary*

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## FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Lincoln-St. Charles County Medical Society

A dinner meeting of the Lincoln-St. Charles County Medical Society was held at the Southern Air, Wentzville, Tuesday evening, January 23. The evening festivities began with a social hour followed by dinner and then the program.

The scientific presentation was given by R. E. Hammes, pediatrician, St. Charles, who spoke on "Pediatric Visual Diagnosis."

V. P. Muenster, M.D., *Secretary*

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## SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

### Lafayette-Ray County Medical Society

The December meeting of the Lafayette-Ray County Medical Society was held at Maib's Cafe in Lexington, on December 12, 1961. The meeting consisted of a social hour followed by dinner. The business meeting consisted of election of officers.

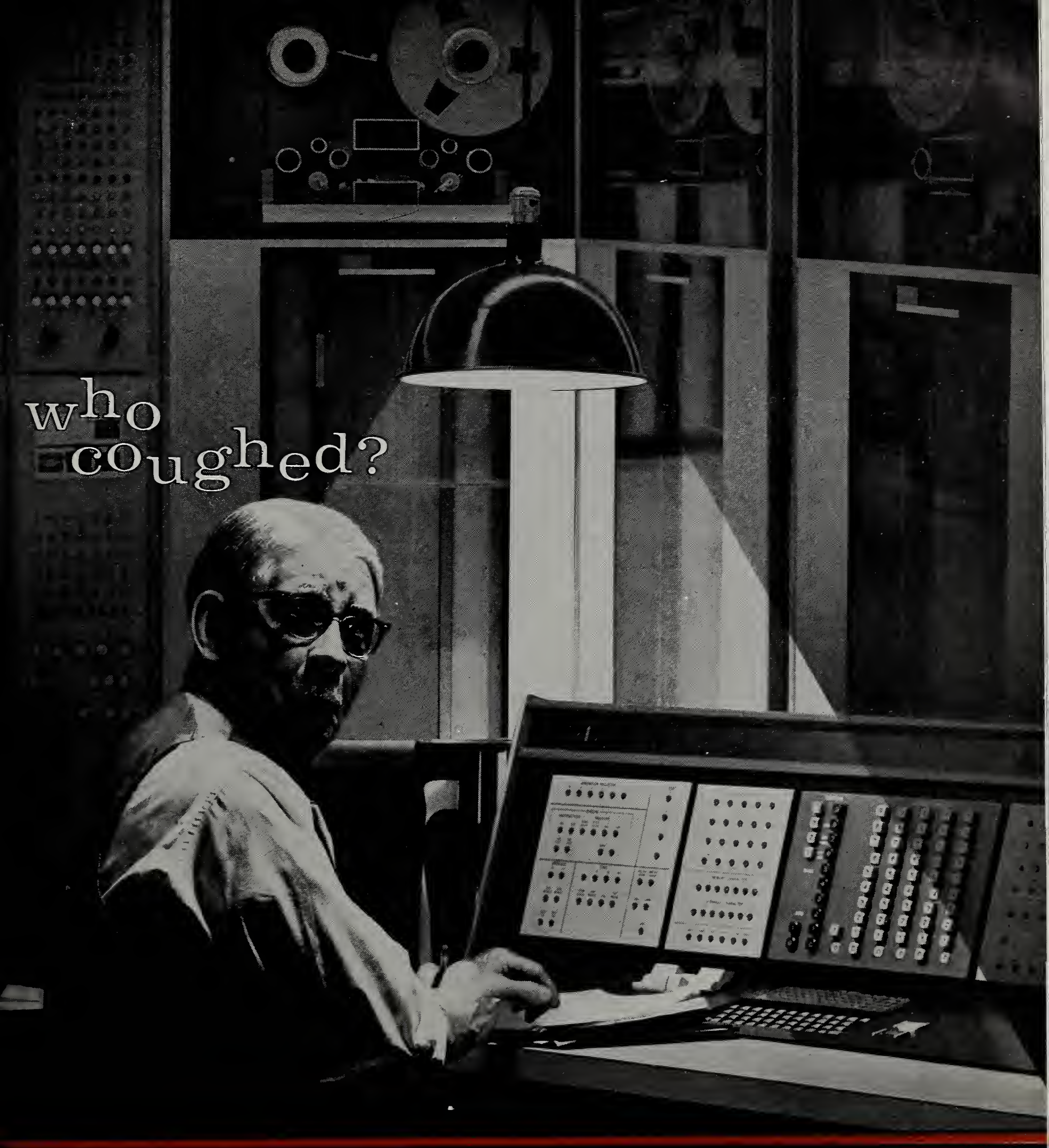
New officers for the year 1962 are: George K. Davault, M.D., president, Ray County, Richmond; Wayne Boydston, M.D., secretary-treasurer, Lafayette County, Odessa; Wilfred E. Martin, M.D., Delegate to MSMA, Lafayette County, Odessa; Franklin A. Crozier, M.D., Ray County, Richmond, Delegate to MSMA.

The business meeting was followed by group singing of Christmas carols led by Catherine Boydston, M.D. An educational program was not scheduled for this meeting.

Wayne Boydston, M.D., *Secretary*

### Pettis County Medical Society

The Pettis County Medical Society was host to a joint dinner meeting of the Henry, Johnson, Saline, Morgan and Lafayette-Ray County Medical Societies and the doctors' wives at the Pacific Blue Room in Sedalia, January 17. Following an enjoyable social hour, an excellent steak dinner was served at the Pacific Cafe.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Following the dinner Dr. John Lamy, president of the Pettis County Medical Society, presented Dr. Carl Siegel, Chairman of Committee on Civil Defense for the Missouri State Medical Association and the Missouri Academy of General Practice, who gave an interesting talk on Civil Defense and explained the purpose of and demonstrated a medical self help kit consisting of a projector and 12 lessons which teach people what to do if the doctor does not get there. Following this talk the ladies retired to their own meeting at the residence of Dr. and Mrs. Robert Stewart.

**Doctors and wives in attendance numbered 80.**

The scientific portion of the evening was presented by Dr. William Gaunt, clinician, and Dr. M. Pinson Neal, pathologist from the Missouri University Medical Center, in the form of a Clinical Pathological Conference. This part of the program was most interesting as well as informative. Slides were shown to demonstrate the pathology of the case. Dr. Neal congratulated the group on such a large attendance and the interest manifested in the discussion. Dr. Lamy in turn thanked the two guest speakers for bringing such an interesting program to the group.

**Dr. Neal met two former students, Dr. Kauffman and Dr. Boydston.**

The president mentioned two items that should be discussed—first, the matter of raising the State Medical dues and, second, the feasibility of selecting a central meeting place for the Tri County Medical Society. Dr. Lamy called upon Mr. Ray McIntyre, Field Secretary of our State Medical Association, to elaborate upon these two items. Mr. McIntyre stated that the raising of state dues will come up before the House of Delegates during the State Meeting in St. Louis. In reference to item No. 2 he thought that it would be better to meet in Sedalia because it was more centrally located. The group went on record to hold their future meetings in Sedalia unless another society asked to be host. There being no further business the meeting was adjourned to meet in May at the Whiteman Air Force Base in Knobnoster which is always a standing annual invitation.

**Seated at head table were Drs. Daum, Neal, Lamy, Mrs. Lamy, Gaunt and Maddox.**

Albert R. Maddox, M.D., *Secretary*

### West Central Missouri Medical Society

The regular meeting of the West Central Missouri Medical Society was held at the Nevada Country Club, December 14, 1961. The usual social and fellowship hour preceded a fine steak dinner.

The meeting for our Christmas Season program was called to order by President Robert Magee who introduced Father William Beachy, Chaplain at St. Luke's Hospital, Kansas City. Father Beachy is an M.D., had a residency in internal medicine, and is board certified in this field. He was associated with Dr. Max Berry in

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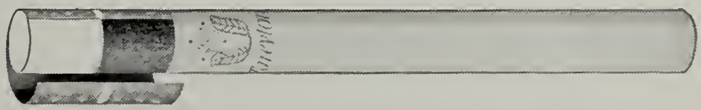

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Kansas City and later entered the ministry and has been serving as Chaplain at St. Luke's. He presented a timely subject in which he as a physician sees the great possibilities that the clergy and the physician have working together for the good of the patient. His was an excellent talk and was enjoyed by all present.

Following this presentation, President Magee called for the report of the Nominating Committee. The report was: for president, Donald Giesler, Osceola; vice-president, A. W. Ecklund, Pleasant Hill; secretary-treasurer, Carter W. Luter, Butler. The motion was made and seconded that the report be accepted and the doctors named be elected by acclamation. The motion carried. These physicians will be the officers for 1962.

Dr. O. B. Barger, Councilor, gave a report on the State Association Council action in proposing to raise the annual dues by $15.00. He explained that the reason for this was due to loss of income of the Journal of the MSMA from advertising from the many drug concerns following the hearings of the Kefauver Committee. He pointed to the student loan fund of the Missouri State Medical Foundation which needs the support of all component societies of the state. It was his opinion in regard to the bill concerning medical care of the aged that if it were brought to a vote as of now that the bill would probably pass. He suggested that physicians secure persons of their acquaintance to write to their congressmen and senators opposing this bill.

The secretary brought to the floor for discussion the possibility of raising our Society dues by $10.00 for this year. Dr. Barger indicated that this could not be done as printing had been done for the statements and that all we could do now was to make an assessment. A motion to this effect was made, seconded and passed. This need has been brought about by the slow depletion of our balance due to the Athletic Injury Program each fall and by the losses accrued by the difference between the guarantee made to restaurants for our meals and the number who actually shown up. It is felt that this will more than make up for losses in both instances.

No further business at hand, the meeting was adjourned to meet in Harrisonville, January 11, 1962.

Carter W. Luter, *Secretary*

**Meeting of January 11**

The regular meeting of the West Central Missouri Medical Society was held at the Wagon Wheel Cafe, Harrisonville, Thursday, January 11, with an opening social hour, followed by a most delicious steak dinner.

After dinner President Don Giesler called the scientific meeting to order and presented Dr. Vernon Wilson, Dean of the Medical School of the University of Missouri. Dean Wilson, as is his usual custom, came through with a fine report on the medical school and discussed many of the problems at the Medical Center. The Medical Center is expanding from year to year. The freshman class has been raised to 85. There have been a great many substantial grants made to the school to permit some fine research work. The school of nursing has become considerably larger and now has about 300 students in training. The hospital has gradually opened more beds and the service, state wide, has been much better this last year over previous years. The school is interested in producing doctors for the State of Missouri. He spoke on the method of contacting the various department heads for the admissions of patients from out state physicians. He touched upon the subject of student admissions and it seems that medical schools have now come to the conclusion that many doctors have held for a long time, that the straight A student in high school, and in his premedic years, does not always make the best doctor. Since the number of applications for entrance to medical schools has dropped, the middle grade student is being considered as he should be.

Dr. Wilson was the speaker.

Charles Koelling, Director of the Postgraduate Department of the Medical School, was introduced. He spoke on the department's plans for the future at the Medical Center for postgraduate courses, and touched on plans for teams to go out over the state to societies to present certain types of medical symposiums. This will be a

# “nutrition…present as a modifying or complicating factor in nearly every illness or disease state”[1]

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

**cardiac diseases** “Who can say, for example, whether the patient chronically ill with myocardial failure may not have a poorer myocardium because of a moderate deficiency in the vitamin B-complex? Something is known of the relationship of vitamin C to the intercellular ground substance and repair of tissues. One may speculate upon the effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic disease.”[2] 2. Kampmeier, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

**arthritis** “It is our practice to prescribe a multiple vitamin preparation to patients with rheumatoid arthritis simply to insure nutritional adequacy . . .”[3]
3. Fernandez-Herlihy, L: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

**digestive diseases** Symptoms attributable to B-vitamin deficiency are commonly observed in patients on peptic ulcer diets.[4] Daily administration of therapeutic vitamins to patients with hepatitis and cirrhosis is recommended by the National Research Council.[5] 4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

**degenerative diseases** “Studies by Wexberg, Jolliffe and others have indicated that many of the symptoms attributed in the past to senility or to cerebral arteriosclerosis seem to respond with remarkable speed to the administration of vitamins, particularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of aging persons is lowered, even to the danger point, more than is the case in the average American adult.”[6] 6. Overholser, W., and Fong, T.C.C. in Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

**infectious diseases** Infections cause a lowering of ascorbic acid levels in the plasma; and the absorption of this vitamin is reduced in diarrheal states.[7] 7. Goldsmith, G A.: Conference on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec.10) 1960.

**diabetes** Diabetics, like all patients on restricted diets, require an extra source of vitamins.[8] “Rigidly limiting the bread intake of the diabetic patient automatically eliminates a large amount of thiamin from the diet. . . . There is some evidence of interference with normal riboflavin utilization during catabolic episodes.”[9]
8. Duncan G. G.: Diseases of Metabolism 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

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great help to the program committee which in the past has had some troublesome times getting programs lined out for the year.

Ray McIntyre, Field Secretary, was present and gave some information relative to the report of the American Hospital Association from their House of Delegates relative to care of the aged.

Delegates to the Missouri State Meeting in St. Louis for 1962 will be as follows: Vernon County, Delegate, Roy Pearse, Nevada; Alternate, Rolla Wray, Nevada; Cedar County, Delegate, Robert Magee, Eldorado Springs; Alternate, William Richter, Stockton; St. Clair County, Delegate, Don Giesler, Osceola; Alternate, Robert Brownsberger, Appleton City; Cass County, Delegate, Edward Jones, Harrisonville; H. A. Tracy, Belton; Bates County, Delegate, R. E. Baska, Butler; Alternate, A. L. Hansen, Butler.

**Informal conversation followed the meeting.**

Dr. Don Giesler named the following Committees: Board of Censors and Credentials Committee: five years, William Ellett; four years, O. B. Barger; three years, Rolla Wray; two years, C. W. Luter; one year, Jackson Moody. Program Committee to be made up of President Giesler, V. P. Ecklund, Secretary Luter, Roy Pearse and Robert Brownsberger. Committee on Public Relations and Grievances: Edward Jones, Harrisonville; F. Martin, Nevada; William Ellett, Appleton City; A. W. Ecklund, Pleasant Hill; Robert Magee, Eldorado Springs. Executive Committee: Rolla Wray, Nevada; Robert Magee, Eldorado Springs; Stanley Kern, Osceola.

The meeting adjourned to meet in Butler in February.

Carter W. Luter, *Secretary*

## EIGHTH DISTRICT

DOYLE C. McCRAW, BOLIVAR, COUNCILOR

### Greene County Medical Society

The annual business meeting of the Greene County Medical Society and the Greene County Medical Society Foundation was held Friday, December 22, 1961, at Galli's Half-a-Hill with 36 members and three guests present. The president, Dr. John P. Ferguson presided.

Mr. Bervil Ivy and Mr. Ron Affolter of American Business Systems presented a demonstration of Thermofax office equipment.

Upon motion by Dr. Lemmon, seconded by Dr. Ivy, the minutes of the November meeting were approved as published in the *Bulletin.* The president presented the annual report of the treasurer and upon motion by Dr. Tillman, seconded by Dr. McAlhany, the report was approved.

The president declared the annual election of officers to be in order and emphasized that as provided by the by-laws of the Society and Foundation, all officers elected would serve both organizations. The president read the slate of officers proposed by the nominating committee at the November 24, 1961, meeting and called for additional nominations. There being none, and upon motion by Dr. Moseley, seconded by Dr. Knabb, the by-laws were waived and the secretary instructed to cast a unanimous ballot to the end that the nominative slate as presented by the nominating committee became the elective slate. As a result of a unanimous vote on this motion, the following were elected to office in the Greene County Medical Society Foundation and Greene County Medical Society: President-Elect, Harry D. Silsby, M.D., to serve as President in 1963; secretary, Dr. Francis M. Maple; treasurer, Dr. M. D. Bonebrake, for a three-year term on the council, Dr. F. T. H'Doubler Jr.; for a three-year term on the Council, Dr. John Westerfield Williams; (automatically remaining on the Council are Drs. F. T. Moseley and Kenneth E. Knabb with terms expiring in 1962 and Dr. H. B. Ivy and James T. Brown, with terms expiring in 1963); for one-year terms as Delegates to the House of Delegates of the Missouri State Medical Association. Drs. Peterson, Ferguson, Kenneth Knabb, Walter Tillman Jr.; for one-year terms as Alternate Delegates to the House of Delegates of the Missouri State Medical Association, G. B. Lemmon Jr., M.D., to serve as Dr. Peterson's Alternate, Dr. E. M. Powell to serve as Dr. Ferguson's Alternate, Dr. Howard Mc-

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Alhany to serve as Dr. Knabb's Alternate and Dr. William H. Snead to serve as Dr. Tillman's Alternate; for the three members at large to serve on the nominating committee with the three past presidents (Drs. Siceluff, Tillman and Ferguson), Drs. Sneed, Wood and Clawson.

The election of officers being declared duly completed, the president asked the new officers to stand for recognition.

The president announced that in order to conserve time at this meeting, all committee reports were accepted by title and will be published in the January and February *Bulletins* for the information of the membership.

There followed the annual report of the president presented by Dr. John Ferguson. Dr. Ferguson then presented the president-elect, Dr. Stanley S. Peterson, who expressed appreciation to Dr. Ferguson for his leadership during the last year.

There being no further business, the meeting was adjourned.

F. T. H'Doubler Jr., *Secretary*

## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Mineral Area County Medical Society

A. M. Evans, M.D., Chief of Internal Medicine at Ellis Fischel State Cancer Hospital, Columbia, spoke at a meeting of the Mineral Area County Medical Society, Thursday night, January 25, at the State Hospital in Farmington. Dr. Evans spoke on "The Chemotherapy of Cancer."

A question and answer period followed the formal presentation.

Paul Dennis, M.D., *Secretary*

## AMENDMENT TO CONSTITUTION OF MSMA

This is the second publication of an amendment adopted by the House of Delegates at the 1961 Session, to lay on the table for one year. The amendment is:

Amend Article VII, Section 1, of the Constitution by striking out the word "ten" in line four and by inserting in lieu thereof the word "eleven."

The purpose is to change the number of Councilor Districts from ten to eleven. If the amendment is adopted, St. Louis County will become District 11. The counties of Jefferson, Lincoln-St. Charles, Franklin-Gasconade-Warren will make up District 4.

At the 1961 meeting of the House of Delegates, a special committee to study the Councilor District Set-up made the following report:

"This special committee, appointed by the President in compliance with a resolution adopted by the 1960 House of Delegates, makes the following recommendation: That St. Louis County be established as a separate Councilor District to be known as the 11th Councilor District and that the Constitution be amended so that the number of Councilors be increased from 10 to 11." All members concurred in this recommendation except Dr. Richard H. Kiene. Members of the committee were Drs. H. E. Petersen, Robert B. Bassett, John F. Pearl, J. L. Washburn, Roy Pearse, Richard H. Kiene, Kenneth Glover, James D. Butts, W. D. English, and W. F. Francka, Chairman.

The 1961 Reference Committee on Amendments to the Constitution and By-Laws approved this amendment unanimously.

This portion of the report of the Reference Committee was adopted by the House by a vote of 56 to 43.

Amendments to the Constitution of the Association must lie on the table for one year. Thus, this amendment to increase the number of Councilor Districts will be presented for vote at the 1962 Annual Session. A two thirds majority of delegates present and voting is required for passage.

# MISSOURI STATE MEDICAL ASSOCIATION

## *104th Annual Session*

## Hotel Chase, St. Louis

## March 18, 19, 20, 21, 1962

### TIME AND PLACE OF MEETINGS

#### Sunday, March 18

12:30 p.m. Registration for House of Delegates, Lobby Floor.
1:30 p.m. House of Delegates, Chase Club.
3:00 p.m. Reference Committee Meetings, Hunt, Park, English, Embassy, Colonial A, Colonial B Rooms (2nd Floor East, Hotel Chase).
6:30 p.m. Committee on Diabetes and Missouri Diabetes Association Dinner Meeting, Stockholm Room, Park Plaza Hotel.
7:00 p.m. Dinner in Honor of Secretaries and Presidents of County Societies and New Members, Khorassan Room.

Gaslight Varieties, sponsored by Woman's Auxiliary, St. Louis County Medical Society.

#### Monday, March 19

8:00 a.m. Registration, Lobby Floor.
9:00 a.m. Scientific Session, Khorassan Room.
10:30 a.m. Intermission to View Exhibits, Lobby and Khorassan A.
11:00 a.m. Scientific Session, Khorassan Room.
12:00 noon Committee on Maternal Welfare Luncheon, Regency Room.
12:00 noon 50 Year Club Luncheon, Park Room.
2:00 p.m. Scientific Session, Khorassan Room.
2:00 p.m. Scientific Session, Lido Room.
3:30 p.m. Intermission to View Exhibits, Lobby and Khorassan A.
4:00 p.m. House of Delegates, Regency Room.
4:45 p.m. Missouri State Medical Foundation, Regency Room.
4:45 p.m. Reference Committee Meetings, Park, Colonial and Palladian Rooms.
5:30 p.m. Eastern Missouri Psychiatric Society Dinner Meeting, St. Louis Medical Society Building.
6:30 p.m. Missouri Society of Internal Medicine Dinner, Lido Room.
6:30 p.m. St. Louis Gynecological Society Dinner, Gatesworth Hotel.
6:30 p.m. Missouri State Surgical Society Dinner, Starlight Roof.
6:30 p.m. Civil Defense Disaster Medical Care Committee Dinner Meeting, Hunt Room.
6:30 p.m. Missouri Radiological Society Dinner, Stockholm Room, Park Plaza Hotel.

#### Tuesday, March 20

8:00 a.m. Registration, Lobby Floor.
9:00 a.m. Scientific Session, Khorassan Room.
10:30 a.m. Intermission to View Exhibits, Lobby and Khorassan A.
11:00 a.m. Scientific Session, Khorassan Room.
12:00 noon University of Missouri Medical Alumni Association Luncheon, Zodiac Room.
2:00 p.m. Scientific Session, Khorassan Room.
3:00 p.m. Intermission to View Exhibits, Lobby and Khorassan A.
3:30 p.m. Scientific Session, Khorassan Room.
3:30 p.m. Scientific Session, Lido Room.
7:30 p.m. Annual Banquet in Honor of Past Presidents, Khorassan Room.

#### Wednesday, March 21

7:00 a.m. Registration, Lobby Floor.
7:30 a.m. House of Delegates Breakfast Meeting, Chase Club.
9:30 a.m. Medico-Economics Session, Khorassan Room.
11:00 a.m. Adjournment.

## COMMITTEE ON DIABETES AND MISSOURI STATE DIABETES ASSOCIATION

### DINNER MEETING

**Sunday, March 18, 1962, 6:30 p.m., Stockholm Room, Park Plaza Hotel**

H. E. Oppenheimer, M.D., Presiding

The Role of the Kidney in the Disposal of Insulin, Henry T. Ricketts, M.D., Chicago.

### PANEL

**Monday, March 19, 1962, Khorassan Room, Hotel Chase**

J. H. Summers, M.D., Lebanon, Presiding

9:00 a.m. What's New.
Moderator: C. Thorpe Ray, M.D., Columbia.
Panelists:
  Medicine: William F. Miller, M.D., Dallas.
  Surgery: Denton A. Cooley, M.D., Houston, Texas.
  Obstetrics: Phil C. Schreier, M.D., Memphis, Tenn.
  Ear, Nose and Throat: Joseph H. Ogura, M.D., St. Louis.

Abstract of Dr. Schreier's Presentation.

The recognition of a number of new types of ovarian tumors in the last 25 years has led to problems in differential diagnosis and therapy. The presentation deals with the various facets of the more recently recognized varieties of ovarian tumors as well as some of the traditional ones. All are illustrated.

Abstract of Dr. Ogura's Presentation.

Many developments in otolaryngology have occurred in the last decade. In the ear, the nearly normal restoration of hearing by the stapes operation is well known. The ankylosed footplate is bypassed by either the polyethlene strut or a wire and the use of vein grafts has been a technical development that has decreased failure. Some progress has been made in eradicating the complications of chronic otitis media and a chance for restoring hearing in a selected group is offered. Simple perforations of the drum can be closed by vein grafts. The treatment of paralysed facial nerve by Bell's palsy has been highly successful by the decompression procedure. All these advances have been made possible by the development of micro-surgical technics. Within the last two years, the use of high frequency ultra sound destruction of the vestibular end of the 8th nerve offers promise for ridding the patient of dizziness in Meniere's disease.

In nasal surgery the advances have been only a few. The decompression operation for malignant exophthalmos has been eminently successful in restoring vision and cosmetic improvement. Combined approaches of the external nasal pyramid and septum have now been recognized to be a necessary part of nasal surgery in patients with nasal obstruction and external deformity. The technics that have been developed have been directed at obtaining the best functional and cosmetic result at one operation instead of the two stage procedure.

For the throat, there have been numerous advances. Experience has been gathered with the conservation surgery which effectively "cures" cancer in the supraglottic and pharyngeal areas previously treated by total laryngectomy. The functional result has been excellent in the swallowing and voice is good and the patient does not have a tracheostomy. This operation has been applied to other diseases which have been previously considered hopeless. Cases of severe lye burns of the larynx and esophagus can now be rehabilitated by a combined laryngologic and thoracic surgeon approach. The colon substitution to the pharynx has worked in a significant number of patients. In the area of trauma to the larynx it has been learned that the supraglottic structures may be removed and the pharynx repaired, indeed even with paralyzed cords, these patients can be rehabilitated without a tracheostomy. In the area of subglottic trauma, resection and end-end anastomosis of the second tracheal ring to the thyroid cartilage effectively rids the patient of a tracheostomy tube. Decompression procedures for unilateral idiopathic paralysis offers hope of restoring function.

10:30 a.m. Intermission to View Exhibits.

## GENERAL SESSION

Monday, March 19, 1962, Khorassan Room, Hotel Chase

David N. Kerr, M.D., St. Louis, Presiding

11:00 a.m. Inborn Errors in Metabolism, David Yi-Yung Hsia, M.D., Chicago.

11:30 a.m. Some Recent Developments in Surgery of Acquired Heart Disease Including Valve Replacement, Denton A. Cooley, M.D., Houston, Texas.

The era of open heart surgery has increased the challenge for surgical treatment of acquired lesions of the heart. Although some valvular lesions are correctible by relatively simple technics not requiring an open heart, an increasing number of advanced valvular insufficiency and stenosis are being treated surgically. Moreover, efforts are being made to operate upon patients with multiple valve lesions. The need for prosthetic devices for replacement of hopelessly diseased valves is becoming increasingly evident.

During the last six years more than 1,300 operations using the pump oxygenator for temporary cardiopulmonary bypass have been performed. About 25 per cent of these operations were for acquired heart lesions. Various technics of valve replacement and repair have been used during this period and are being evaluated clinically and experimentally. The results of this experience will be presented along with other experiences in the treatment of acquired heart disease.

## COMMITTEE ON MATERNAL WELFARE

### LUNCHEON MEETING

Monday, March 19, 1962, 12:00 noon, Regency Room, Hotel Chase

William B. See, M.D., Columbia, Presiding

Report of the Committee on Maternal Welfare, Seymour Monat, M.D., St. Louis.
Case Presentations, Robert S. Brown, M.D., Kansas City, and Seymour Monat, M.D., St. Louis.
Discussion, Phil C. Schreier, M.D., Memphis, Tenn.

## 50 YEAR CLUB

### LUNCHEON MEETING

Monday, March 19, 1962, 12:00 noon, Park Room, Hotel Chase

Helmuth H. Kramolowsky, M.D., St. Louis, President, Presiding

## MEDICAL SESSION

Monday, March 19, 1962, Khorassan Room, Hotel Chase

Gerald L. Miller, M.D., Kansas City, Presiding

Medical Session. Khorassan Room.

2:00 p.m. Polyarteritis, John H. Talbott, M.D., Chicago.

The subject of polyarteritis, although not the commonest of the uncommon connective tissue diseases, appears to be increasing in incidence decade by decade. There is some experimental evidence to suggest hypersensitivity as an etiologic mechanism. In recent years, several cases of diffuse vasculitis have appeared which followed long term therapy with steroids. The diffuse manifestations of the disease affects vital structures including the kidney, the peripheral nervous system, and the heart.

Sponsored by the Missouri Society of Internal Medicine.

2:30 p.m. Diabetes Mellitus in the Elderly and Its Treatment with Hypoglycemic Agents, Henry T. Ricketts, M.D., Chicago.

A suspected diagnosis of diabetes must be confirmed by determination of the blood sugar, preferably two hours after an ordinary meal. Values above 140 mg. per cent (true glucose in venous blood) are diagnostic. Lower values are inconclusive and call for a glucose tolerance test. The test should be interpreted with the realization that many elderly, presumably nondiabetic, individuals have higher and/or later blood sugar peaks and a slower return to normal than do younger persons.

Diabetes with onset in middle or late life is typically mild and frequently can be controlled with diet alone. If, in patients 65 years of age or older, a proper diet results in freedom from glycosuria, two-hour postprandial blood sugar levels below 180 mg. per 100 ml., and maintenance of normal body weight, no further measures are necessary. Higher blood sugar values require administration of hypoglycemic agents.

Of the available oral agents, tolbutamide is the oldest and best. For most patients the dose is 0.5 gm. two to four times daily before meals, and never more then 3 gm. daily. It rarely causes hypoglycemia and side effects are infrequent and minimal. Chlorpropamide is more potent and lasts longer than tolbutamide, but serious hypoglycemic reactions have been reported, especially in the aged. The dose should not exceed 500 mg. given once daily before breakfast. Phenformin is effective in some cases but often produces gastrointestinal disturbance. It rarely causes hypoglycemia. The usual dose is 25 to 50 mg. two or three times daily with meals.

If oral agents do not keep the postprandial blood sugar below 180 mg. per 100 ml., they should be withdrawn and NPH or lente insulin given. The starting dose is 10 units daily 30 minutes before breakfast. This can be increased by 5 units each week until satisfactory control has been achieved.

Sponsored by the Missouri Diabetes Association.

3:00 p.m. Management of Pulmonary Emphysema, William F. Miller, M.D., Dallas, Texas

The treatment of pulmonary emphysema can be approached properly only by understanding the nature of physiologic derangements induced by this disorder and its related disturbances. The most effective approach is prevention of the initial insult to the respiratory system. Otherwise, one must deal with the consequences of bronchopulmonary inflammation and the physiologic disturbances resulting therefrom. Chronic bronchitis and premature expiratory collapse of the airways resulting from loss of lung elasticity are the principal causes of obstructive breathing and dyspnea. Treatment of chronic bronchitis is accomplished by bronchial hygiene measures, including bronchodilators and heated detergent aerosols along with antibiotics, anti-inflammatory agents, and mechanical assistance to breathing by IPPB when indicated.

Control of expiratory collapse of the airways is accomplished by training the patients to breathe in a slow, controlled fashion using abdominal-diaphragmatic muscles. Emphysema belts are an adjunct to this procedure. Much can be accomplished with chronically debilitated patients by general physical rehabilitation procedures, often using oxygen as a means of reducing physiologic stress to a point of tolerance. Exercise training not only increases activity tolerance but, as a result of improved muscle efficiency, reduces the degree of physiologic stress at any level of activity.

3:30 p.m. Intermission to View Exhibits, Lobby and Khorassan A.
4:00 p.m. House of Delegates, Regency Room.
4:45 p.m. Missouri State Medical Foundation, Regency Room.

## SURGICAL SESSION

**Monday, March 19, 1962, Lido Room, Hotel Chase**

Benjamin N. Jolly, M.D., Mexico, Presiding

2:00 p.m. Diagnosis and Treatment of Cushing's Syndrome, H. William Scott Jr., Nashville, Tenn.

Thirty patients with Cushing's syndrome treated at the Vanderbilt University Medical Center during the last decade are reported. Recent advances in the study of adrenocortical function have resulted in a more accurate and precise approach to the diagnosis and treatment of Cushing's syndrome. Through the use of special adrenal stimulation and suppression tests, it is possible to predict correctly whether the cause of excessive hydrocortisone production is due to adrenal hyperplasia, adenoma or carcinoma with a great degree of accuracy. These special studies of adrenocortical function have proven equally valuable in ruling out the diagnosis in some 65 patients suspected of having Cushing's syndrome. Total bilateral adrenalectomy has come to be the surgical treatment of choice in Cushing's syndrome secondary to hyperplasia; this, too, is largely due to the knowledge gained through surgical experience in conjunction with special adrenocortical function studies during the last decade.

Of the 30 patients with Cushing's syndrome in the present study there are 24 cases of adrenal hyperplasia, four cases of adrenal carcinoma, and two cases of adrenal adenoma. A detailed analysis of the results of diagnostic studies and surgical treatment will be presented.

Sponsored by the Missouri State Surgical Society.

2:30 p.m. Assisted Circulation by Synchronous Counterpulsation, Dwight Emary Harken, M.D., Boston, Mass.

A new technic of assisting the circulation will be discussed. Blood is aspirated through a cannula in the femoral artery during the patient's cardiac systole and returned during diastole. This reduces the pressure work of systole yet increases body and coronary artery perfusion during diastole.

Experimental applications to coronary occlusion, shock and congestive heart failure will be discussed. Early clinical applications will be mentioned.

3:00 p.m. Surgical Treatment in the Presence of Pulmonary Hypertension in Cardiac and Pulmonary Disorders, Peter V. Moulder, M.D., Chicago.

A certain percentage of patients with intra- and extra-cardiac shunts have pulmonary hypertension. Surgical therapy will always anticipate higher risk and lower percentage of late good results than in the non-hypertensive patient. Present status of special methods for surgical procedures and the intensive preoperative and postoperative care will be described. The role of the physician seeing these patients first will be discussed in relation to this.

A special care program and the preoperative and operative assessment methods will be presented in relation to patients with pulmonary hypertension or with "expectant hypertension" requiring pneumonectomy or extensixe pulmonary resection.

Sponsored by the Missouri Chapter, American College of Chest Physicians.

3:30 p.m. Intermission to View Exhibits.

4:00 p.m. House of Delegates. Regency Room.

4:45 p.m. Missouri State Medical Foundation, Regency Room.

## MISSOURI SOCIETY OF INTERNAL MEDICINE

### DINNER MEETING

**Monday, March 19, 1962, 6:30 p.m., Lido Room, Hotel Chase**

Maxwell G. Berry, M.D., Kansas City, Presiding

Business session.
Informal address, John H. Talbott, M.D., Chicago.

## MISSOURI STATE SURGICAL SOCIETY

### DINNER MEETING

**Monday, March 19, 1962, 6:30 p.m., Starlight Roof, Hotel Chase**

A. P. Rowlette, M.D., Moberly, Presiding

An Appraisal of Vagotomy and Antral Resection in Surgical Treatment of Duodenal Ulcer, H. William Scott Jr., M.D., Nashville.
(Reservations to be made through Eugene M. Bricker, M.D., 100 N. Euclid Ave., St. Louis 8. Admission by reservation only.)

## COMMITTEE ON CIVIL DEFENSE DISASTER MEDICAL CARE

### DINNER MEETING

**Monday, March 19, 1962, 6:30 p.m., Hunt Room, Hotel Chase**

Carl D. Siegel, M.D., Sedalia, Presiding

Business Meeting, Committee on Civil Defense Disaster Medical Care and County Society Civil Defense Representatives.
Program Open to Membership
Medical Self Help Training Program, Carl D. Siegel, M.D., Sedalia.

## ST. LOUIS GYNECOLOGICAL SOCIETY

### DINNER MEETING

**Monday, March 19, 1962, 6:30 p.m., Gatesworth Hotel**

Richard Paddock, M.D., St. Louis, Presiding
Delivery After Previous Cesarean Section, R. Gordon Douglas, M.D., New York.

## EASTERN MISSOURI PSYCHIATRIC SOCIETY

### DINNER MEETING

**Monday, March 19, 1962, 5:30 p.m., St. Louis Medical Society Building**

Robert B. Deitchman, M.D., Presiding

7:30 p.m. Panel: Psychiatric Patients and Their Future.
Panelists:
- Thomas S. McPartland, M.D., Director of Research, Greater Kansas City Mental Health Foundation.
- Louis H. Kohler, M.D., Director, St. Louis State Hospital.
- George A. Ulett, M.D., Director, Missouri Division of Mental Diseases.
- Louis Belinson, M.D., Deputy Director, Missouri Division of Mental Diseases.

## PANEL

**Tuesday, March 20, 1962, Khorassan Room, Hotel Chase**

Wyeth Hamlin, M.D., Hannibal, Presiding

9:00 a.m. Recent Developments in Infectious Diseases.

Moderator: Carl V. Moore, M.D., St. Louis.

Viruses, Common Colds and Cancer, Robert J. Huebner, M.D., Bethesda, Md.

Both colds and cancers are traditionally regarded as cryptic entities almost transcending normal biologic concepts and requiring national foundations and "categorical" approaches for their eventual solution. Holy crusades to find the causes of these illnesses have invoked hypotheses from every source except the Delphic oracle and Macbeth's witches' cauldron; strange and often wonderful, they have furnished many interesting answers, but no real solutions for either colds or cancers.

It now appears that viruses cause not only colds, but also certain cancers. To this extent they are simply infectious diseases, definable biologic entities subject to methods of inquiry as straightforward as those of conventional microbiology and as promising as those of modern virology.

Recent Developments in Mycotic Disease, Michael L. Furcolow, M.D., Kansas City, Kan.

Since he lives in the center of the histoplasmosis area, the Missouri physician should keep abreast of the developments in histoplasmosis. The most important recent development is the demonstration of the seriousness and prevalence of the chronic cavitary type. This disease is commonly mistaken for tuberculosis.

Increasing recognition of the importance of fungus diseases to the general practitioner will be stressed, including histoplasmosis and blastomycosis. Diagnostic and therapeutic measures for the fungus diseases will be discussed.

The Molecular Trend in Medical Bacteriology, W. Barry Wood, M.D., Baltimore, Md.

Like modern biology in general, medical bacteriology has "gone molecular." Examples of this trend will be cited which relate to the following topics: bacterial structure, bacterial metabolism, virulence, defense mechanisms of the host and antibacterial therapy.

10:30 a.m. Intermission to View Exhibits.

## GENERAL MEETING

**Tuesday, March 20, 1962, Khorassan Room, Hotel Chase**

M. Pinson Neal, M.D., Columbia, Presiding

11:00 a.m. Surgical Emergencies in the Neonatal Period, J. Eugene Lewis, M.D., St. Louis.

The more common thoracic and gastrointestinal problems of the newborn period are presented. This will include diaphragmatic hernia, esophageal atresia, pneumothorax and congenital intestinal obstruction. Sixty per cent of the deaths in this group is due to failure to make a prompt or accurate diagnosis; 25 per cent is due to technical errors or lack of surgical judgment. Diagnosis and management will be emphasized. The presentation will be illustrated.

## UNIVERSITY OF MISSOURI MEDICAL ALUMNI ASSOCIATION

### LUNCHEON MEETING

**Tuesday, March 20, 1962, 12:00 noon, Zodiac Room, Hotel Chase**

Virgil Jeans, M.D., Joplin, Presiding

Presentation of the Seventh Citation of Merit of the University of Missouri to a Medical Alumnus, J. Eugene Lewis Jr., M.D., St. Louis, recipient.
Remarks by Vernon E. Wilson, M.D., Columbia, Dean, University of Missouri School of Medicine.
Remarks by J. Eugene Lewis Jr., M.D., St. Louis.

## GENERAL MEETING

**Tuesday, March 20, 1962, Khorassan Room, Hotel Chase**

Claude W. Cooper, M.D., Thayer, Presiding

2:00 p.m. Office Psychiatry for the Nonpsychiatrist, Jackson A. Smith, M.D., Chicago.

The physician who is not a psychiatrist is repeatedly confronted by two types of psychiatric problems in office practice, namely, the patient who has an illness which is primarily emotional and, more frequently, the individual whose physical symptoms are aggravated or distorted by mental (emotional) forces.

This paper is concerned with the recognition of these two types of patients and their management in the office.

2:30 p.m. Cutaneous Manifestations of Systemic Disease, Adolph Rostenberg, M.D. Chicago.

The importance of the skin in physiological, biochemical, and immunological mechanisms will be discussed briefly. The emphasis of the talk, however, will be on the role of the skin as an indicator of internal disease. A variety of conditions, including lupus erythematosus, dermatomyositis, necrobiosis lipoidica diabeticorum, pseudoxanthoma elasticum, xanthomatosis, will be shown to indicate how the skin lesions enable one to assess what is going on inside. Various skin tumors will be shown, again to emphasize that the diagnosis of more serious difficulties can often be made by looking at the skin.

3:00 p.m. Intermission to View Exhibits.

## PANEL

**Tuesday, March 20, 1962, Lido Room, Hotel Chase**

Richard Paddock, M.D., St. Louis, Presiding

3:30 p.m. Obstetric Hemorrhage and Shock.

Moderator: R. Gordon Douglas, M.D., New York.

Recognition and Prophylaxis of Obstetric Hemorrhage and Shock, A. C. Trueblood, M.D., St. Louis.

Use of Drugs in Obstetric Hemorrhage and Shock, Eugene G. Hamilton, M.D., St. Louis.

The ideal treatment for hemorrhagic shock is stopping bleeding and immediate blood replacement. However, it sometimes occurs that for a number of reasons there is delay in instituting one or the other modalities of treatment. In cases where blood replacement cannot be immediately done, certain pharmacologic agents have been brought to bear on the problem.

This discussion deals with the harmful effects of pressor substances and the beneficial effects of Cortisone, and ganglionic blocking agents. There are still unknown quantities relative to dosage and timing.

Use of Fluids and Blood Transfusion in Obstetric Hemorrhage, Seymour Monat, M.D., St. Louis.

Since all abnormal signs and symptoms of hemorrhagic shock are the direct result of reduction in blood volume, the prime objectives in treatment are: (1) rapid whole blood replacement, and (2) immediate control of open arterial hemorrhage. The diagnosis of an open artery can be made whenever the blood pressure fails to stabilize following the rapid administration of from 750 to 1,000 cc. of blood intravenously.

Direct arterial transfusion may save life whenever the blood pressure will not rise despite large amount of intravenous blood.

The amount of blood to be given to the patient cannot be estimated from the hematocrit reading. By making use of a formula determined by the blood pressure level, the body weight and the known or guessed prebleeding hemoglobin, a more accurate estimate of total blood loss can be achieved.

Any modern operating room has the facilities to permit auto-transfusion. Blood in the abdominal cavity offers a rapid, readily available type-specified source for transfusion.

Mention will be made of the use of vasopressor agents, plasma volume expanders, "universal-donor" transfusions, and the use of unmatched type O, Rh negative blood in emergent situations.

Surgical Procedures Used in the Treatment of Obstetric Hemorrhage and Shock, Carl Dreyer, M.D., St. Louis.

Sponsored by the St. Louis Gynecological Society.

## PANEL

**Tuesday, March 20, 1962, Khorassan Room, Hotel Chase**

Peter G. Danis, M.D., St. Louis, Presiding

3:30 p.m. The Handicapped Child in Missouri.

Moderator: C. Arden Miller, M.D., Kansas City, Kan.

Carl J. Marienfeld, M.D., Columbia.

Beginning in 1912, the National Development of Handicapped Children's Programs have proceeded along the general guide lines established by the Children's Bureau. In their words, the handicapped child is served best when he is treated first as a child, then as a handicapped child and, finally, as a child with a particular handicap.

In Missouri this program began in 1927. Here as in most states, because of the realistic budgetary and organizational limitations, the program began with its focus upon the latter or particular handicap which was orthopedic in nature. This continued with gradual expansion of treatment centers, and admission to the service was possible only through the county court, which was charged with the determination of financial eligibility.

The recent change in the State Crippled Children's law in 1959, with a broader definition of crippling conditions and the elimination of the county court procedure has enabled a gradual increase in numbers of children served, services given and categories of physicians giving these diagnostic and consultative services in the treatment centers.

The Crippled Children's Service function is only that of enabling these services if they are not otherwise available, and if these services are requested by the patient and the referring physician, who remains the child's doctor. The associate physicians of the Crippled Children's Service, the contracting treatment centers, and the central staff are in only a consultative and diagnostic relationship with the patient. Their work is conducted through and with the help of the referring physician in each case.

Administratively the Board of Curators of the University of Missouri conduct this state program.

Frank B. Wilson, Ph.D., Brentwood.

A. R. Sharp, M.D., St. Louis.

The function of the Child Development Clinic at the Cardinal Glennon Hospital, St. Louis, and the problems of the mentally retarded child and his family will be discussed.

D. Elliott O'Reilly, M.D., St. Louis.

Benjamin Milder, M.D., St. Louis.

Examination and evaluation of the partially sighted child (corrected vision with an acuity of 20/70 or less in the better eye) enable the ophthalmologist to make a contribution beyond his assessment of the pathologic process and the refractive error. He can contribute to the total integration of the child into a sighted environment by pursuing these steps:

1. Examination and diagnosis of the pathologic problem may point out remedial measures. The employment of optical aid devices seems to depend less on the nature of the pathology than on the ability to achieve successful retinal magnification.
2. Determination of the visual aid methods best suited to each child reveals that only a few of the partially sighted children require expensive or unusual types of spectacles.
3. Correlation of these recommendations with the classroom requirements of the child; this involves orienting the teacher as well as the parents with regard to the child's visual capabilities, as well as to his limitations.

Communication between doctor, parents, teacher and, often, social worker, may determine the extent to which the child successfully utilizes his available vision and, ultimately, his success in adapting to his total environment.

The Washington University Optical Aids Clinic in St. Louis has studied the results of such examinations in children at the Missouri School for the Blind. A significant number of these children have shown improvement in personal adjustment and skills. Working with vision aids has stimulated changes in their study methods reflecting greater utilization of their available visual capacities.

L. Wayne Hart, M.D., Kansas City.

## ANNUAL BANQUET IN HONOR OF PAST PRESIDENTS

**Tuesday, March 20, 1962, Khorassan Room, Hotel Chase**

J. H. Summers, M.D., Lebanon, Presiding

Introduction of Guests.
Presentation of Past Presidents.
Presentation of 50 Year Pins.
Installation of the President, Donald M. Dowell, M.D., Chillicothe.
Presentation of Past President's Key.
Speaking Up for American Medicine, Edward R. Annis, M.D., Miami, Fla.

## MEDICO-ECONOMIC SESSION

**Wednesday, March 21, 1962, Khorassan Room**

Donald M. Dowell, M.D., Chillicothe, Presiding

9:30 a.m. Panel: Your Estate and You.

Panelists:
Mr. T. Hartley Pollock, St. Louis.
Mr. Charles N. Welsch Jr., St. Louis.
Mr. Clement L. Maher, St. Louis.

The average physician works hard and is engrossed in his work. It is the unusual physician who takes the time to plan his estate and his retirement. However, he has an estate plan—whether he has planned it or not. The State of Missouri has set up an estate plan, but it is probable that wives and children of physicians would wish that he had planned it himself with more definite arrangements and ones that differ from those the state has made.

11:00 a.m. Adjournment.

## DELEGATES

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|---|---|---|
| Andrew | Forrest C. Long, Savannah | Warren C. Baker, Savannah |
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| Butler-Ripley Wayne | H. H. Cline, Piedmont | |
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| Chariton-Macon-Monroe-Randolph | L. E. Huber, Moberly | T. S. Fleming, Moberly |
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| Dallas-Hickory-Polk | George Robinson, Humansville | C. H. Barnett, Bolivar |
| Dunklin | J. A. Zimmerman, Kennett | G. Q. Dunmire, Kennett |
| Franklin-Gasconade-Warren | L. O. Muench, Washington | B. P. Eisenmann, New Haven |
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| Henry | J. O. Smith, Clinton | Richard King, Clinton |
| Howard | | |
| Jackson | Hector W. Benoit, Kansas City | Berneil W. Andrews, Kansas City |
| Jackson | John F. Bowser, Kansas City | Bailey C. Andrus, Kansas City |
| Jackson | Philip L. Byers, Kansas City | G. Neill Berry, Kansas City |
| Jackson | Dillard M. Eubank, Raytown | Charles C. Cooper, Kansas City |
| Jackson | Will R. Eubank, Kansas City | David F. Eubank, Kansas City |
| Jackson | Harold L. Gainey, Kansas City | Braham J. Geha, Kansas City |
| Jackson | William W. Gist, Kansas City | John A. Griffith, Kansas City |
| Jackson | William M. Kitchen, Kansas City | Robert W. Hamill, Kansas City |
| Jackson | James R. McVay, Jr., Kansas City | Waldo S. Holt, Kansas City |
| Jackson | Gerald L. Miller, Kansas City | Ray O. Keltner, Kansas City |
| Jackson | William C. Mixson, Kansas City | Cecil G. Leitch, Blue Springs |
| Jackson | Ralph Perry, Kansas City | Bentley A. Nelson, Kansas City |
| Jackson | William F. Sanders, Kansas City | Carl M. Peterson, Kansas City |
| Jackson | Robert K. Skillman, Shawnee Mission, Kansas | Walter J. Stelmach, Kansas City |
| Jackson | Raymond W. Stockton, Kansas City | Edward H. Stratemeier, Kansas City |
| Jackson | Charles B. Wheeler, Jr., Kansas City | Franklin H. Wakefield, Kansas City |
| Jasper | M. Foster Whitten, Carthage | R. R. Cohle, Carthage |
| Jasper | Gregory A. Schulte, Joplin | Virgil Jeans, Joplin |
| Jefferson | F. L. Kozal, Crystal City | Harry Yoskit, Festus |
| Johnson | C. M. Lederer, Warrensburg | Mario G. Gonzales, Warrensburg |
| Lafayette-Ray | W. E. Martin, Odessa | Ben Brasher, Lexington |
| Lafayette-Ray | F. A. Crozier, Richmond | Isadore Goldberg, Braymer |
| Lewis-Clark-Scotland | Landis Y. Davis, Canton | W. L. Ellery, LaGrange |
| Lewis-Clark-Scotland | | |
| Lewis-Clark-Scotland | | |
| Lincoln-St. Charles | Louis P. Hetlage, Troy | E. O. Damron, Elsberry |
| Lincoln-St. Charles | O. W. Towers, St. Charles | George E. Kister, St. Charles |

| *County Society* | *Delegate* | *Alternate* |
|---|---|---|
| Marion-Ralls-Shelby | Robert Lanning, Hannibal | B. L. Murphy, Hannibal |
| Marion-Ralls-Shelby | | |
| Marion-Ralls-Shelby | | |
| Mid-Missouri | | |
| Phelps | M. K. Underwood, Rolla | Barbara E. Russell, Rolla |
| Crawford | F. A. Elders Jr., Cuba | A. R. Baumann, Steelville |
| Dent | B. J. Bass, Salem | Alice S. Crosby, Salem |
| Pulaski | Clyde S. Miller, Waynesville | |
| Maries | | |
| Laclede | H. W. Carrington, Lebanon | Ben B. Hurst, Lebanon |
| Miller | | |
| Mineral Area | | |
| St. Francois | | |
| Iron | | |
| Madison | | |
| Washington | | |
| Reynolds | | |
| Ste. Genevieve | | |
| Moniteau | | |
| Montgomery | E. J. T. Andersen, Montgomery City | S. J. Byland, Wellsville |
| Morgan | Jack Gunn, Versailles | Ruth Kauffman, Versailles |
| Nodaway-Holt-Atchison-Gentry-Worth | Elvin D. Imes, Maryville | R. E. Dunshee, Maryville |
| Nodaway-Holt-Atchison-Gentry-Worth | James Humphrey, Mound City | |
| Nodaway-Holt-Atchison-Gentry-Worth | Wallace Carpenter, Rock Port | Edw. F. Bare, Tarkio |
| Nodaway-Holt-Atchison-Gentry-Worth | Albert L. Carlin, Stanberry | Frank H. Rose, Albany |
| Nodaway-Holt-Atchison-Gentry-Worth | Frank B. Matteson, Grant City | |
| North Central | | |
| Adair | Spencer L. Freeman, Kirksville | M. T. English, Kirksville |
| Schuyler | | |
| Knox | | |
| Sullivan | | |
| Putnam | | |
| Ozarks | | |
| Barry | Mary Newman, Cassville | Robert Donley, Monett |
| Lawrence | Kenneth Glover, Mount Vernon | A. J. Graves, Mount Vernon |
| Stone | Fred Wommack, Crane | A. P. Capetti, Crane |
| Christian | Stanley Roper, Ozark | Donald B. Rogers, Nixa |
| Taney | J. M. Threadgill, Forsyth | Roy Gillespie, Branson |
| Newton | George Blankenship, Neosho | L. W. Taylor, Neosho |
| McDonald | | |
| Pemiscot | O. W. Cook, Caruthersville | Daniel R. Hensley, Wardell |
| Perry | A. E. McDermott, Perryville | S. G. Legner, Perryville |
| Pettis | C. G. Stauffacher, Sedalia | A. L. Walter, Sedalia |
| Pike | | |
| Platte | Ireland Kimball, Parkville | H. G. Parker, Platte City |
| St. Louis City | Paul F. Max, St. Louis | A. H. Bindbeutel, St. Louis |
| St. Louis City | Richard W. Yore, St. Louis | William F. Melick, St. Louis |
| St. Louis City | Stanley F. Hampton, St. Louis | Edwin C. Ernst, Jr., St. Louis |
| St. Louis City | Arthur W. Neilson, St. Louis | Robert B. Bassett, St. Louis |

| County Society | Delegate | Alternate |
|---|---|---|
| St. Louis City | Alphonse McMahon, St. Louis | Joseph B. Grindon, St. Louis |
| St. Louis City | Charles S. Sherwin, St. Louis | Robert E. Funsch, St. Louis |
| St. Louis City | George L. Hawkins, Jr., St. Louis | C. Alan McAfee, St. Louis |
| St. Louis City | Louis H. Kohler, St. Louis | George E. Roulhac, St. Louis |
| St. Louis City | Walter Baumgarten, Jr., St. Louis | William A. Tibbs, Jr., St. Louis |
| St. Louis City | Roy V. Boedeker, St. Louis | Marshall B. Conrad, St. Louis |
| St. Louis City | David N. Kerr, St. Louis | Albert M. Repetto, St. Louis |
| St. Louis City | Joseph C. Edwards, St. Louis | Charles Gulick, St. Louis |
| St. Louis City | Edward M. Cannon, St. Louis | Charles H. Nicolai, St. Louis |
| St. Louis City | Vernon E. Michael, St. Louis | William A. Knight, Jr., St. Louis |
| St. Louis City | Eugene V. Henschel, St. Louis | Maurice J. Lonsway, Jr., St. Louis |
| St. Louis City | Michael M. Karl, St. Louis | Benjamin F. Smith, St. Louis |
| St. Louis City | Warren M. Lonergan, St. Louis | Melvin L. Goldman, St. Louis |
| St. Louis City | J. Otto Lottes, St. Louis | Harold E. Walters, St. Louis |
| St. Louis City | Joseph Lucido, St. Louis | George B. Rader, St. Louis |
| St. Louis City | Joseph C. Peden, Sr., St. Louis | Gene B. Starkloff, St. Louis |
| St. Louis City | Jerome I. Simon, St. Louis | M. Richard Carlin, St. Louis |
| St. Louis City | J. William Thompson, St. Louis | Melvin Tess, St. Louis |
| St. Louis City | Don C. Weir, St. Louis | William Macon, Jr., St. Louis |
| St. Louis City | Frank G. Zingale, St. Louis | Warren M. Lonergan, St. Louis |
| St. Louis | Wm. H. Bailey, St. Louis | Harold J. Freiheit, St. Louis |
| St. Louis | Edgar W. Davis, St. Louis | Edward Holscher, St. Louis |
| St. Louis | Maurice A. Diehr, St. Louis | Louis F. Howe, St. Louis |
| St. Louis | Oscar P. Hampton, Jr., St. Louis | Robert C. Kingsland, St. Louis |
| St. Louis | Joseph B. Kendis, St. Louis | Paul W. Miles, St. Louis |
| St. Louis | Robert A. Mayer, St. Louis | Melvin Roblee, St. Louis |
| St. Louis | James R. Meador, St. Louis | Melvin Schwartz, St. Louis |
| St. Louis | Charles Miller, Jr., St. Louis | Richard A. Sutter, St. Louis |
| St. Louis | Roy A. Walther, Jr., St. Louis | Fred Teiber, St. Louis |
| St. Louis | George J. Wulff, Jr., St. Louis | Lois C. Wyatt, St. Louis |
| Saline | C. A. McBurney, Slater | |
| Semo | | |
| Stoddard | Richard Comeau, Dexter | T. W. Waddle, Dexter |
| New Madrid | Samuel Sarno, Morehouse | Charles Reeder, New Madrid |
| Mississippi | Wilbur Davis, Charleston | John Dernoncourt, Charleston |
| Scott | Leo A. Bruce, Sikeston | W. A. Finney, Chaffee |
| South Central | | |
| Howell | M. A. Fowler, West Plains | J. N. Wiles, West Plains |
| Oregon | C. W. Cooper, Thayer | |
| Texas | Joe Wall, Houston | Wm. F. Dryer, Houston |
| Wright | R. E. Denney, Mountain Grove | |
| Douglas | Marvin Gentry, Ava | |
| Ozark | | |
| Webster | T. M. Macdonnell, Marshfield | C. R. Macdonnell, Marshfield |
| West Central | | |
| Bates | R. E. Baska, Butler | A. L. Hansen, Butler |

| *County Society* | *Delegate* | *Alternate* |
|---|---|---|
| Cass | Edw. Jones, Harrisonville | H. A. Tracy, Belton |
| Cedar | Robert Magee, El Dorado Springs | Wm. Richter, Stockton |
| St. Clair | Donald Giesler, Osceola | Robert Brownsberger, Appleton City |
| Vernon | Roy Pearse, Nevada | Rolla B. Wray, Nevada |

## HOUSE OF DELEGATES

**First Meeting—Sunday, March 18, 1962—1:30 p.m.**

**Chase Club, Hotel Chase**

### Order of Business

Call to Order by the Speaker of the House, William C. Mixson, M.D., Kansas City.
Invocation, J. H. Summers, M.D., Lebanon.
Preliminary Report of the Committee on Credentials.
Roll Call.
Report of the General Committee on Arrangements, Leonard T. Furlow, M.D., St. Louis.
Reading of the Minutes of Previous Meeting. (Published in July 1961 MISSOURI MEDICINE.)
Speaker's Instructions and Appointment of Reference Committees:
    Miscellaneous Affairs, Park Room, 3:30 p.m.
    Reports of Officers, Colonial A Room, 4:00 p.m.
    Medical Education and Public Welfare, Embassy Room, 4:45 p.m.
    Resolutions, English Room, 4:30 p.m.
    Constitution and By-Laws, Hunt Room, 3:00 p.m.
    Necrology, Colonial B Room, 4:45 p.m.
Reading of the President's Message, J. H. Summers, M.D., Lebanon.
Reading of the President-Elect's Recommendations, Donald M. Dowell, M.D., Chillicothe.
Report of the Secretary, John I. Matthews, M.D., Jefferson City.
Report of the Executive Secretary, Mr. Tom R. O'Brien, St. Louis.
Report of the Treasurer, Charles R. Doyle, M.D., St. Louis.
Report of the Woman's Auxiliary, Mrs. Frederick E. Wade, Kansas City.
Reports of the Standing and Special Committees:
    Publication, Charles R. Doyle, M.D., Editor in 1961.
    Scientific and Postgraduate Work, John I. Matthews, M.D., Jefferson City.
    Defense, C. E. Hyndman, M.D., St. Louis.
    Public Policy and Public Relations, Byron M. Stuart, M.D., Boonville.
    Medical Education and Hospitals, Kenneth Glover, M.D., Mount Vernon.
    Cancer, George A. Carroll, M.D., St. Louis.
    Medical Economics, G. W. Winn, M.D., Boonville.
    Mental Health, James N. Haddock, M.D., Webster Groves.
    Maternal Welfare, William B. See, M.D., Columbia.
    Infant and Child Care, E. H. Schwartz, M.D., Springfield.
    Health and Public Instruction, J. R. McDaniel, M.D., St. Joseph.
    Constitution and By-Laws, W. A. Bloom, M.D., Fayette.
    Trauma, Robert E. Funsch, M.D., St. Louis.
    Eye Health, John McLeod, M.D., Kansas City.
    Laboratory Medicine, Angelo Lapi, M.D., Kansas City.
    Industrial Health, H. M. Roebber, M.D., Bonne Terre.
    Diabetes, Henry E. Oppenheimer, M.D., Clayton.
    Anesthesiology, Edward O. Kraft, M.D., St. Louis.
    Hospital and Professional Relations, Ralph Perry, M.D., Kansas City.
    Control of Venereal Disease, Edwin M. Powell, M.D., Springfield.
    Physical Medicine and Rehabilitation, D. Elliott O'Reilly, M.D., St. Louis.
    Civil Defense Disaster Medical Care, Carl D. Siegel, M.D., Sedalia.
    Aging, Stanley S. Peterson, M.D., Springfield.
    Radiology and Ionizing Radiation, Wendell G. Scott, M.D., St. Louis.
    Tuberculosis, Florence E. MacInnis, M.D., Kansas City.
    Study of Cardiac Disease, Earl L. Loyd, M.D., Jefferson City.
    Rural Medical Service, Jack Mullen, M.D., Bonne Terre.

- American Medical Education Foundation, James P. Murphy, M.D., St. Louis.
- Corporate Practice, Donald M. Dowell, M.D., Chillicothe.
- Public Service, R. O. Muether, M.D., St. Louis.

Report of the Council, Kenneth C. Hollweg, M.D., Kansas City.
Appointment of Committee on Nominations, J. H. Summers, M.D., Lebanon.
Unfinished Business.
New Business.

### Second Session—Monday, March 19, 1962—4:00 p.m.
### Regency Room, Hotel Chase

Supplementary Report of the Committee on Credentials.
Reports of the Reference Committees:

- Amendments to the Constitution and By-Laws.
- Miscellaneous Affairs.
- Reports of Officers.
- Medical Education and Public Welfare.
- Resolutions.
- Necrology.

Report of the Council.
New Business.

### Missouri State Medical Foundation

### Annual Meeting—Monday, March 19, 1962—4:45 p.m.
### Regency Room, Hotel Chase

Annual Report, R. O. Muether, M.D., St. Louis.
Election of Board of Trustees.
Election of Officers by Board of Trustees.

### Last Session—Wednesday, March 21, 1962—7:30 a.m.
### Chase Club, Hotel Chase

Call to Order by the Speaker.
Report of the Committee on Credentials.
Reading and Adoption of Minutes.
Report of the Nominating Committee.
Election of Officers.
Report of Councilors elected.
Report of Reference Committees:

- Miscellaneous Affairs.
- Reports of Officers.
- Medical Education and Public Welfare.
- Resolutions.
- Constitution and By-Laws.

Unfinished Business.
New Business (See Sec. 1, Chap. III).
Installation of Officers.
President's Appointment of Members of Committees.
Selection of Place of Next Annual Session.
Adjournment.

# THE MISSOURI SOCIETY OF MEDICAL TECHNOLOGISTS

## *Fifteenth Annual Convention*

**Chase-Park Plaza Hotel**

**St. Louis, Missouri**

**March 18, 19, 20, 21, 1962**

### TIME AND PLACE OF MEETINGS

Sunday, March 18

10:00 a.m. Board of Directors Meeting.
1:30 p.m. Registration, Wohl Dining Room, Barnes Hospital.
2:00 p.m. Business Meeting, Missouri Society of Medical Technologists, Wohl Dining Room.
6:30 p.m. Buffet Supper, Wohl Dining Room.
8:00 p.m. Business Meeting, Missouri Association of Blood Banks, Wohl Dining Room.

Monday, March 19

8:00 a.m. Registration, Chase-Park Plaza Hotel, Stockholm Room.
9:00 a.m. Scientific Session, Presented by the Missouri Association of Blood Banks, Stockholm Room.
10:05 a.m. Coffee Break.
10:20 a.m. Visit Exhibits.
10:40 a.m. Scientific Session, Stockholm Room.
12:00 noon Lunch.
2:00 p.m. Scientific Session, Stockholm Room.
3:00 p.m. Coffee Break.
3:15 p.m. Visit Exhibits.
3:30 p.m. Continuation of Business Meeting of MSMT to discuss Licensure or Alternate Plan, Stockholm Room.
6:30 p.m. Social Hour Sponsored by Aloe Scientific, Cheshire Inn, 7036 Clayton Road.
7:30 p.m. Banquet Sponsored by the Missouri Society of Clinical Pathologists for Members of MSMT, Cheshire Inn.

Tuesday, March 20

8:00 a.m. Registration, Chase-Park Plaza Hotel, Stockholm Room.
9:00 a.m. Scientific Session, Stockholm Room.
10:15 a.m. Coffee Break.
10:30 a.m. Visit Exhibits.
10:45 a.m. Scientific Session, Stockholm Room.
12:00 noon Lunch.
1:00 p.m. Workshop: Spectrophotometry, Wohl Dining Room, Barnes Hospital.
2:00 p.m. Scientific Session, Chase-Park Plaza Hotel, Stockholm Room.
3:00 p.m. Coffee Break.
3:15 p.m. Visit Exhibits.
3:30 p.m. Scientific Session, Stockholm Room.

Wednesday, March 21

8:00 a.m. Registration, Chase-Park Plaza Hotel, Stockholm Room.
9:00 a.m. Scientific Session, Stockholm Room.
10:00 a.m. Coffee Break.
10:15 a.m. Visit Exhibits.
10:30 a.m. Scientific Session, Stockholm Room.
12:00 noon Adjournment.

### SCIENTIFIC SESSION

Chase-Park Plaza, Stockholm Room

**Monday, March 19, 1962**

Presiding: Bernadine Missel, St. Louis
Alternate: Bernice Furtwengler, St. Louis

9:00 a.m. Invocation, Reverand Ernest W. Luehrmann, Chaplain, Deaconess Hospital, St. Louis.
9:05 a.m. Address of Welcome, Lula Mims, M.T. (ASCP), St. Louis.
9:10 a.m. Enzymes and the Red Cell Surface, David Miller, M.D., Director, Blood Bank, Jewish Hospital, St. Louis.

Review of the action of different enzymes on the red cell surface.

9:35 a.m. Peter A. Miescher, M.D., Professor of Medicine, New York University School of Medicine, New York, New York. (Subject to be announced.)
10:05 a.m. Coffee Break.
10:20 a.m. Visit Exhibits.
10:40 a.m. Hemolytic Disease of the Newborn and Hyperbilirubinemia, Teresa Vietti, B.A., M.D., Assistant Professor of Pediatrics, Washington University School of Medicine, St. Louis.

(1) A discussion of the isoimmunization work up including pre and postnatal studies. (2) A discussion of the clinical management, laboratory evaluation and indication for exchange transfusions in patients with hemolytic disease and hyperbilirubinemia.

11:10 a.m. Experience with Newly Designed Equipment for Preparation of Buffy Coat-Poor Red Cell Suspensions for Transfusions, Dorothy Phillips, B.A., Chief Technician, Blood Bank, Barnes Hospital, St. Louis.
11:30 a.m. Presentation of Ortho Award-winning paper submitted by a Medical Technologist.
12:00 noon Lunch.

## SCIENTIFIC SESSION

Chase-Park Plaza, Stockholm Room

**Monday, March 19, 1962**

Presiding: Bernice Koster, St. Louis
Alternate: Rose Rita Schmidt, Festus

2:00 p.m. Workshop on Licensure and New Certification in Medical Technology, Angelo Lapi, M.D., Pathologist, St. Mary's Hospital, Kansas City, and Audrey Wines, M.T. (ASCP), Microbiologist and Serologist, Allen Medical Laboratory, St. Louis.
3:00 p.m. Coffee Break.
3:15 p.m. Visit Exhibits.
3:30 p.m. Continuation of Business Meeting of Missouri Society of Medical Technologists to discuss Licensure or Alternate Plan.

## ANNUAL BANQUET

Cheshire Inn, 7036 Clayton Road

**Monday, March 19, 1962**

6:30 p.m. Social Hour sponsored by Aloe Scientific.
7:30 p.m. Banquet sponsored by the Missouri Society of Clinical Pathologists for the Missouri Society of Medical Technologists.
Master of Ceremonies: Victor B. Buhler, M.D., St. Joseph's Hospital, Kansas City.
Speaker: J. C. Dunlop, D.V.M.

## SCIENTIFIC SESSION

Chase-Park Plaza, Stockholm Room

**Tuesday, March 20, 1962**

Presiding: Sister Martin Mary Fruchtl, S.S.M., St. Louis
Alternate: Ann Vonarx, St. Louis

9:00 a.m. Paper Electrophoresis, Fredric W. Loose, Chemist, Clinical Laboratories, St. Louis.

Systems of electrophoresis and demonstrations of patterns.

# In intestinal "grippe"

## prompt 4 way check of diarrhea

- ✓ Curbs excessive peristalsis
- ✓ Adsorbs toxins and gases
- ✓ Soothes inflamed mucosa
- ✓ Provides intestinal antisepsis

# POMALIN

TRADEMARK

*Liquid*

**EFFECTIVE ANTIDIARRHEAL**

**FORMULA:** *Each 15 cc. (tablespoon) contains:*

| | |
|---|---|
| Sulfaguanidine U.S.P. | 2 Gm. |
| Pectin N.F. | 225 mg. |
| Kaolin | 3 Gm. |
| Opium tincture U.S.P. | 0.08 cc. |

(equivalent to 2 cc. paregoric)

**DOSAGE:** Adults: Initially 1 or 2 tablespoons from four to six times daily, or 1 or 2 teaspoons after each loose bowel movement; reduce dosage as diarrhea subsides.

Children: ½ teaspoon (=2.5 cc.) per 15 lb. of body weight every four hours day and night until stools are reduced to five daily, then every eight hours for three days.

**SUPPLIED:** *Bottles of 16 fl. oz. (raspberry flavor, pink color)*
*Exempt Narcotic. Available on Prescription Only.*

Winthrop
LABORATORIES
New York 18, N. Y.

Before prescribing be sure to consult Winthrop's literature for additional information about dosage, possible side effects and contraindications.

10:15 a.m. Coffee Break.
10:30 a.m. Visit Exhibits.
10:45 a.m. The future of Gas Chromatography in the Clinical Laboratory, George Gantner, M.D., Assistant Professor of Pathology, St. Louis University School of Medicine, Pathologist and Director of Laboratories, Firmin Desloge Hospital, St. Louis.

The gas chromatographic analytical process offers a new tool for separations of complex mixtures and quantitation of their amounts. The potentialities of the method as a laboratory tool will be discussed.

11:15 a.m. Experiences and Considerations with the Use of the Refractometer for Urine Specific Gravities, Eugene F. Tucker, M.D., Assistant Professor of Pathology, St. Louis University School of Medicine; Pathologist, St. Mary's Hospital, St. Louis.
12:00 noon Lunch.

## SCIENTIFIC SESSION

**Tuesday, March 20, 1962**

Barnes Hospital, Wohl Dining Room

1:00 p.m. Workshop, Limit 25.
Spectrophotometry, Vincent P. Perna, M.D., Pathologist, Clinical Laboratories, St. Louis; Mary Ann Kaufmann, M.T. (ASCP), Clinical Laboratories, St. Louis.

Chase-Park Plaza, Stockholm Room

Presiding: Mary Ketterer, St. Louis
Alternate: Jeanette Burchard, Springfield

2:00 p.m. Serum Lipoproteins—Methods and Interpretation, Phillip G. Ackermann, Ph.D., Biochemist, St. Louis Chronic Hospital, Research Assistant Professor, Division of Gerontology, Washington University School of Medicine, St. Louis.

A discussion of the various methods used for the determination of serum lipoproteins. The relationship between the results by the different methods and their interpretation in regard to atherogenesis.

3:00 p.m. Coffee Break.
3:15 p.m. Visit Exhibits.
3:30 p.m. Experiences with Manual and Mechanical Prothrombin times, Thomas J. Cooper, M.D., Pathologist, Clinical Laboratories.

Results of 18 months experience using a "clot timer" for prothrombin determinations.

## SCIENTIFIC SESSION

Chase-Park Plaza, Stockholm Room

**Wednesday, March 21, 1962**

Presiding: Dottie Denton, St. Louis
Alternate: Mary Ann Pexa, St. Louis

9:00 a.m. Status of the Fluorescent Antibody Technique in a Diagnostic Laboratory, Nicholas D. Duffett, Ph.D., Director, Public Health Laboratories, St. Louis Health Division; Lecturer at Washington University, St. Louis.

Discussion will include three of the four projects current in this laboratory e.g., streptococcal infections, gonorrhea, syphilis (rabies will be omitted). Other feasible applications will be discussed.

10:00 a.m. Coffee Break.
10:15 a.m. Visit Exhibits.
10:30 a.m. Fluorescent Technics, in the Diagnosis of Rabies, Raymond F. Gray, Ph.D., Bacteriologist, Clinical Laboratories, St. Louis.

Comparison of methodology and results of rabies diagnosis with the fluorescent Antibody.

11:15 a.m. Direct Photometric Determination of Bilirubin in the Newborn, Vincent P. Perna, M.D., Pathologist, Clinical Laboratories.
12:00 noon Adjournment.

## TECHNICAL EXHIBITS

### Lobby Floor, Hotel Chase

Abbott Laboratories, North Chicago, Booth 4.

Quickly relieves burning urination. Especially useful for use over a long period of happy to answer any questions you may have concerning our leading products and new developments.

C. W. Alban & Co., Inc., St. Louis. Booth 7.

A. S. Aloe Company, St. Louis. Booth 17.

See 2nd Century, a fresh original concept in professional furniture combining major advances in function, durability and beauty. Unique Vyn-Steel finish is permanent laminate of virtually indestructible vinyl to steel. Choose from a brilliant galaxy of eight striking color combinations. Other Aloe specialties and new items are also displayed.

Anderson Pharmaceuticals, Columbus, Ohio. Booth 42.

Andercid Antacid Wafers—this unique new product incorporates effective antacid medication in the unusually palatable form of crisp, oven-baked wafers. The refreshing taste and texture encourage patient acceptance when intermittent use is indicated and help to ensure maintenance on medication when long-term antacid therapy is necessary.

Ayerst Laboratories, Chicago. Booth 8.

The Ayerst exhibit features Riopan and Plegine. Riopan, a true buffer antacid, provides rapid and prolonged relief of gastric hyperacidity. No side effects have been reported. Plegine is recommended in the management of obesity wherever excessive appetite is responsible for overweight. Few side effects have been observed with Plegine.

Missouri Medical Service (Blue Shield), St. Louis. Booth 16.

St. Louis Blue Shield Professional Relations representatives are available at Booth 16 to answer your questions about current programs, including "Blue Major," the St. Louis Blue Cross-Blue Shield major medical plan, the Federal Employees Health Benefits program and the other medical-surgical plans now available to your patients.

Borcherdt Company, Chicago. Booth 23.

Borcherdts are featuring Maltsupex® (Malt Soup Extract), Liquid and Powder: Laxative modifier of milk for constipated babies. Also useful for geriatric constipation and pruritus ani. Urolitia® for chronic urinary tract infections in older patients. Quickly releives burning urination. Especially useful for use over a long period of time. Ferromalt® Tablets, nonconstipating Ferrous Sulfate Tablets. Good clinical response without usual side effects of oral iron. Ferromalt Tablets are inexpensive and well tolerated. Stop in for recently published papers and samples.

Ciba Pharmaceutical Products, Inc., Summit, N. J. Booth 50.

Forhistal® is a new, low-dosage antiallergic and antipruritic agent. Clinically, Forhistal has proved highly effective in a wide range of allergic and pruritic disorders. It is well tolerated by patients of all ages. Forhistal is available in four forms of issue: Lontabs®, Tablets, Syrup and Pediatric Drops.

The Coca-Cola Company, Atlanta, Ga. Booth 21.

Ice-cold Coca-Cola served through the courtesy and cooperation of the Coca-Cola Bottling Co. of St. Louis, and The Coca-Cola Company.

Desitin Chemical Co., Inc., Providence, R. I. Booth 19.

Desitin Ointment with Hydrocortisone: Provides hydrocortisone 1 per cent (as the alcohol) added to the well known Desitin formula of Norwegian cod liver oil. Desitin Hydrocortisone Cream: Nonstaining, washable hydrophilic base with sol. al. acetate. An elegant cosmetic preparation with HC 1 per cent. Desitin Cor-D-Tar Cream: Nonstaining hydrophilic base with a special solution coal tar 3 per cent and nonstaining diiodohydroxzquin 2 per cent. For bacterial-fungal-infectious eczematous discomfort.

Donley-Evans & Co., St. Louis. Booth 47.

Dorsey Laboratories, Lincoln, Nebr. Booth 33.

We are pleased to help make this Annual Session a big success. If you have not yet used Triaminic in your practice, won't you drop by our booth and permit us to discuss the benefits of oral decongestion? Samples of Tain, Trisulfaminic, Tussagesic and Kanumodic will be available for your use during the meeting.

Dumas-Wilson & Co., St. Louis. Booth 46.

Encyclopaedia Britannica, Kansas City, Mo. Booth 38.

Geigy Pharmaceuticals, Ardsley, N. Y. Booth 32.

Geigy cordially invites Members and Guests of the Association to visit its exhibit. The exhibit features important new therapeutic developments in the management of inflammation, as well as current concepts in the control of hypertension and edema; depression; obesity, and other disorders which may be discussed with physicians and representatives in attendance.

Hamilton-Schmidt Surgical Co., St. Louis. Booth 20.

Hyland Laboratories, Los Angeles. Booth 26.

Hyland Laboratories cordially invites all attendees and guests to visit its exhibit booth where representatives will be on hand to answer technical questions concerning its many diagnostic laboratory aids. Particularly featured will be two rapid and accurate laboratory tests for the determination of serum cholesterol and beta-lipoproteins.

Knoll Pharmaceutical Company, Orange, N. J. Booth 44.

You may now prescribe fruit-flavored, taste appealing Quadrinal Suspension for asthma patients who prefer a liquid to the time proven Quadrinal Tablet. Dilaudid for pain that synthetic analgesics frequently fail to relieve; also for "the cough that must be controlled." Metrazol, Vita-Metrazol and Nico-Metrazol Elixir and Tablets for the geriatric and convalescent patient. Akineton, the new antiparkinsonism agent.

Eli Lilly & Company, Indianapolis, Ind. Booth 45.

You are cordially invited to visit the Lilly exhibit located in Booth 45. The Lilly sales people in attendance welcome your questions about Lilly products and recent therapeutic developments.

Mead Johnson Laboratories, Evansville, Ind. Booth 22.

The Mead Johnson Laboratories' exhibit has been arranged to give you the optimum in quick service and product information. To make your visit productive, specially trained representatives will be on duty to tell you about their products.

Medco Products Co., Inc., Tulsa, Okla. Booth 6.

Presenting the Medco-Sonlator. Providing a new concept in therapy by combining muscle stimulation and ultra sound simultaneously through a Single Three-Way Sound Applicator. The Medco-Sonlator is a distinct advance in the effectiveness of physical therapy in your office or hospital. A few minutes spent in our booth should prove of value to your practice.

The Medical Protective Company, Fort Wayne, Ind. Booth 2.

As the No. 1 Malpractice Insurer, The Medical Protective Company offers unexcelled coverage. With exceptional proficiency in defense, so essential to the doctor's protection today, its experience in successfully handling 82,000 claims and suits during 63 years of Professional Protection Exclusively is unparalleled in the professional liability field.

Merck Sharp & Dohme, Philadelphia. Booth 1.

The theme of the Merck Sharp & Dohme exhibit is "Service to Medicine." One phase features the details of the Merck Sharp & Dohme Postgraduate Program. Another feature includes information on teaching films for use by the profession and, also, lay films that can be utilized to portray the story of medicine to the lay public. The exhibit is concluded with a display of finger-tip files on selected Merck Sharp & Dohme products.

Milex Products, Peoria, Ill. Booth 37.

V. Mueller & Co., Chicago. Booth 40.

On exhibition we have a background of the latest innovations in V. Mueller instruments. We invite your questions or particular problems involving your own surgical armamentarium.

The Pelvic Anchor Corporation, Rochester, N. Y. Booth 28.

Pelvic Anchor Surgical Components as accessories to the major surgical tables provide all the advantages previously experienced with this equipment on the orthopedic tables, plus the features ever present in the general surgical units. Patient positioning with pelvic control, effective traction and precision radiographs.

Pfizer Laboratories, New York. Booth 49.

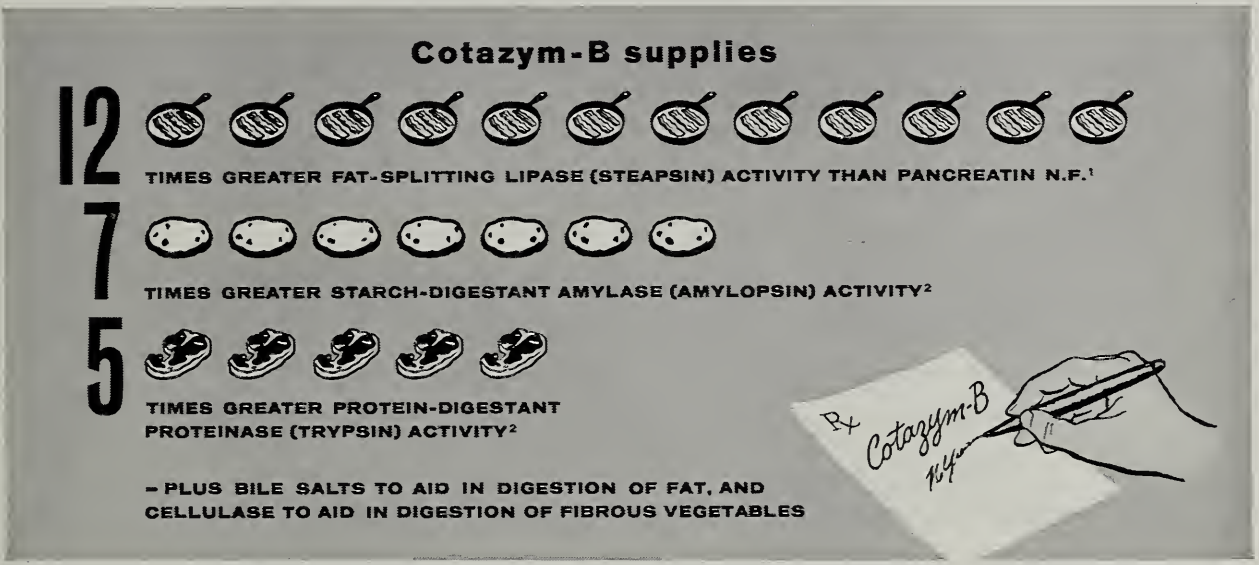
Professional Service Representatives from Pfizer Laboratories will be pleased to have you in attendance at their booth to discuss the latest products of Pfizer research.

Pharmich Laboratories, Cedar Rapids, Iowa. Booth 35.

Our new product form Niphylline T. D. is featured at this meeting. This combination of Neothylline and Pentaerythritol Tetranitrate is now available in a Time

# *Digestant needed?*

Cotazym-B provides the most potent pancreatic enzyme action available!



**Cotazym-B supplies**

**12** TIMES GREATER FAT-SPLITTING LIPASE (STEAPSIN) ACTIVITY THAN PANCREATIN N.F.[1]

**7** TIMES GREATER STARCH-DIGESTANT AMYLASE (AMYLOPSIN) ACTIVITY[2]

**5** TIMES GREATER PROTEIN-DIGESTANT PROTEINASE (TRYPSIN) ACTIVITY[2]

– PLUS BILE SALTS TO AID IN DIGESTION OF FAT, AND CELLULASE TO AID IN DIGESTION OF FIBROUS VEGETABLES

COTAZYM-B is a new comprehensive digestant containing bile salts, cellulase and *lipancreatin* for supplementing deficient digestive secretions and helping to restore more normal digestive processes. *Lipancreatin* —"the most potent pancreatic extract available"[3]—is a concentrated pancreatic enzyme preparation developed by Organon.[4] It has been clinically proven to be an effective agent for treating digestive disorders of enzymatic origin.[1,4,5,6,7,8] COTAZYM-B is indicated for the symptomatic relief of dyspeptic or functional digestive disturbances characterized by bloating, belching, flatulence and upper abdominal discomfort.
*Dosage:* 1 or 2 tablets with water just before each meal.

Organon

REFERENCES: 1. Best, E. B., Hightower, N. C., Jr., Williams, B. H., and Carobasi, R. J.: South. M.J. 53:1091, 1960. 2. Analytical Control Laboratories, Organon Inc. 3. Best, E. B., et al.: Symposium at West Orange, N. J., May 11, 1960. 4. Thompson, K. W., and Price, R. T.: Scientific Exhibit Section, A.M.A., Atlantic City, N. J., June 8-12, 1959. 5. Weinstein, J. J.: Discussion in Keifer, E. D., Am. J. Gastro. 35:353, 1961. 6. Ruffin, J. M., McBee, J. W., and Davis, T. D.: Chicago Medicine, Vol. 64, No. 2, June, 1961. 7. Berkowitz, D., and Silk, R.: Scientific Exhibit Section, A.M.A., New York, June 25-30, 1961. 8. Berkowitz, D., and Glassman, S.: N. Y. St. J. Med. 62:58, 1962.

ORGANON INC., WEST ORANGE, NEW JERSEY

Cotazym®-B

Lipancreatin Bile Salts Cellulase

Disintegration Tablet, enabling a cardiac or asthma patient to obtain sustained relief on morning and evening dosage. Our representative Mr. "Hub" Bundy is on hand to answer your inquiries.

PHILIPS ROXANE, INC., COLUMBUS, OHIO. BOOTH 27.

PLOUGH LABORATORIES, INC., MEMPHIS, TENN. BOOTH 30.

WM. P. POYTHRESS & CO., INC., RICHMOND, VA. BOOTH 48.

The Poythress booth, No. 48, features Bensulfoid Lotion, outstanding and distinctive new treatment for acne; Synirin, for pain; and Mudrane, effective balanced formula for asthma. Solfoton, Solfoserpine, Panalgesic and Trocinate will also be featured. Our representatives invite your requests for literature and professional trial supplies.

PROFESSIONAL MANAGEMENT MIDWEST, KANSAS CITY. BOOTH 3.

Our representatives will be pleased to have you visit our booth and discuss your business problems with us. This year, Professional Management Midwest starts its nineteenth year of service to Midwestern doctors. That service has meant ease of practice and a larger net income to hundreds of doctors, why not you?

RIKER LABORATORIES, INC., NORTHRIDGE, CALIF. BOOTH 9.

The Riker Representatives will be happy to answer any questions you may have concerning their products.

ROCHE LABORATORIES, NUTLEY, N. J. BOOTH 31.

Librium—a therapeutic agent for superior, safer, faster control of nervousness, anxiety, tension and other common emotional disturbances without the dulling effect or depressant action of the tranquilizers. Gantanol—a single sulfonamide for the common bacterial infections encountered in daily practice.

WILLIAM H. RORER, INC., PHILADELPHIA. BOOTH 14.

Ananase Tablets—A new oral, fibrin-depolymerizing (Proteolytic) enzyme from vegetable origin. Maalox—A pleasant tasting, non-constipating antacid in Suspension, Tablets No. 1 and Tablets No. 2. Representatives will gladly answer questions concerning Rorer products.

SANBORN COMPANY, WALTHAM, MASS. BOOTH 24.

The new Sanborn Frommer Cell Counter as well as new Electrocardiographs of advanced design and function together with the latest models of other instruments for diagnostic use are displayed and demonstrated at the Sanborn Company booth. Demonstrations and/or data also are available on Sanborn instruments for biophysical research—single and multi-channel recording systems, monitoring oscilloscopes and physiologic tranducers. Qualified Sanborn representatives will be pleased to answer questions and assist you with technical problems.

SANDOZ PHARMACEUTICALS, HANOVER, N. J. BOOTH 34.

Mellaril—the first selective phenothiazine exhibiting potent tranquilizing activity without antiemetic action. The greatest toleration, notably relative absence of extra pyramidal symptoms, enhances its usefulness in management of major and minor emotional disorders. Torecan—as a sequel to the original research which led to the synthesis of Mellaril, a tranquilizer relatively devoid of antiemetic activity, the Sandoz Laboratories have now succeeded in developing a potent antiemetic with little or no tranquilizing properties. Accordingly, this compound, Torecan, constitutes a more specific antiemetic and the results obtained to date indicate that it is a promising agent for the treatment of nausea and emesis of diverse etiology. Any of our representatives in attendance will gladly answer questions about these and other Sandoz products.

W. B. SAUNDERS COMPANY, PHILADELPHIA. BOOTH 10.

New Saunders books of special interest include: Current Therapy 1962; Florey: Pathology; Owen: Hospital Administration; Hogan & Zommerman: Ophthalmic Pathology; Lore: Atlas of Head and Neck Surgery; and Major & Delp: Physical Diagnosis.

JULIUS SCHMID, INC., NEW YORK. BOOTH 25.

An interesting and informative exhibit featuring Immolin Vaginal Cream-Jel for use without a diaphragm; Ramses Flexible Cushioned and B Bendex Diaphragms; Ramses Vaginal Jelly; Vagisec Jelly and Liquid for Vaginal trichomoniasis therapy; and XXXX (Fourex) Skin Condoms, Ramses, Sheik and Esquire Rubber Condoms for the control of trichomonal reinfection.

G. D. SEARLE & CO., CHICAGO. BOOTH 5.

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products and Research.

SMITH KLINE & FRENCH LABORATORIES, PHILADELPHIA. BOOTH 36.

Our Representatives welcome the opportunity to discuss the application of SK&F products to your specialty and are always ready to be of help in any way they can.

Products featured are: (1) Ornade® Spansule® capsules ;ansule® cap- (2) Combid® Sp sules ; (3) Stelazine® Tablets, and (4) Thorazine®.

### E. R. Squibb & Sons, New York. Booth 18.

E. R. Squibb & Sons has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the Medical Profession in new products or improvements in products already marketed. At Booth 18, we are pleased to present up-to-date information on these advances for your consideration.

### Standard Process Laboratories, Chicago. Booth 12.

Standard Process Laboratories (Subsidiary of Vitamin Products Company, St. Louis). The representatives of the Standard Process Laboratories are eager to contribute to the success of your meeting. We are here to discuss our various products with you and to give you some helpful information. Ask us about our New "Mineral Tranquilizer" and our portable oxygen unit.

### The Stuart Company, Pasadena, Calif. Booth 43.

A cordial invitation is extended to all members and guests attending this meeting to visit the Stuart Company booth. Specially trained representatives will be in attendance to answer your questions on new products developed in our new and modern laboratories which have received international acclaim.

### Strasenburgh Laboratories, Rochester, N. Y. Booth 13.

### U. S. Vitamin & Pharmaceutical Corp., New York. Booth 15.

D B I—new "full-range" oral hypoglycemic agent. D B I, brand of phenformin ($N^1$-B-phenethylbiguanide HCl) is distinctly different in chemical structure and physiologic action from the oral hypoglycemic sulfonylureas. It effectively lowers blood sugar and eliminates glycosuria in mild, moderate and severe diabetes. D B I, in combination with insulin, improves regulation of "brittle" adult and juvenile diabetes. In juvenile diabetes, D B I often permits up to 50 per cent reduction in insulin requirement. Also effective in the insulin-resistant, and in primary and secondary tolbutamide and chlorpropamide failures. Full details available.

### The Upjohn Company, Kalamazoo, Mich. Booth 39.

Professional representatives of The Upjohn Company are eager to contribute to the success of the meeting. We are here to discuss with you products of Upjohn research that are designed to assist you in the practice of your profession. We solicit your inquiries and comments.

### The Warren-Teed Products Co., Columbus, Ohio. Booth 41.

The Warren-Teed Products Company features the following pharmaceutical specialty products at their exhibit: Ilopan—an injectable d-pantothenylalcohol for the treatment and prevention of flatulent gastrointestinal distention. Kaon Elixir—an extremely palatable oral potassium. Modane Tablets—a deconstipant for relief and rehabilitation of the atonic bowel. Warren-Teed representatives cordially welcome all registrants to visit their display.

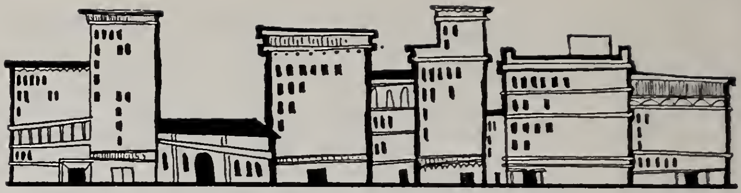
### Westwood Pharmaceuticals, Buffalo, N. Y. Booth 11.

Westwood invites physicians to stop by their booth to discuss their unique dermatological products: Fostex Cake, Fostex Cream, Lowila Cake, Lowila Emollient, Sebulex, Fostril, Alpha-Keri. These products are particularly suitable for personal use by physicians and their families who may be plagued with dandruff, acne, dry and itchy skin and sensitivities to soap. Register so that we may send prescription units to your home.

### Winthrop Laboratories, New York. Booth 29.

Winthrop Laboratories cordially invites you to visit their booth at which we are planning to feature the following product: Winstrol, the new complete "physiotonic" for the underweight, the weak and debilitated. Builds body tissue, confidence and alertness. Winstrol is highly active orally, simple to administer and suitable for prolonged therapy in most cases.

# From the Medical Schools



## ST. LOUIS UNIVERSITY

### Appointment

Dr. Armand E. Brodeur has been appointed Associate Dean of the St. Louis University School of Medicine, it has been announced by the Very Rev. Paul C. Reinert, S.J., President of the University. Dr. Brodeur is assistant professor of clinical radiology and radiologist-in-chief at the Cardinal Glennon Memorial Hospital for Children.

Dr. Brodeur is working closely with Dr. Goronowy O. Broun, newly named dean, on the broader questions which involve policy and development plans for the School of Medicine.

Dr. Brodeur has had three years of administrative experience at the School of Medicine, having served as assistant dean from 1947 to 1949 and again from 1957 to 1958. He has for many years been a member of the student admissions committee.

A member of the medical faculty since 1952, Dr. Brodeur received a Doctor of Medicine degree from St. Louis University in 1947 and a Master's degree in radiology in 1952. From 1952 to 1954, he served as Chief of the Radiological Branch of the U. S. Public Health Service in Washington, D. C. He began his residency work in radiology at the St. Mary's Group of Hospitals in 1949, advancing to the position of associate radiologist in 1957.

Dr. Brodeur has made significant teaching contributions to the field of heart disease. His lectures on congenital heart defects are illustrated with a collapsible heart model Dr. Brodeur designed for use as a teaching device. In his demonstrations, he stresses the commonly occurring errors in heart structure, showing how the surgeon can correct these abnormalities. He has written and lectured on the subject of pediatric radiology.

Under a grant awarded by the United States Public Health Service, he is actively engaged in research studies involving kidney diseases in infants and children. A portion of his work is devoted to compiling a library of motion picture x-rays depicting the various common and rare kidney abnormalities in children.

He is Chairman of the Public Policy and Public Relations Committee of the St. Louis Medical Society and consultant on x-ray of the Catholic Hospital Association of the United States and Canada.

Recently he was appointed to the Society for Pediatric Radiologists and a fellowship in the American College of Radiology was conferred upon him February 9. He is a member of Alpha Omega Alpha, national honorary medical society and serves as counselor of the St. Louis University Chapter. He also holds membership in Alpha Sigma Nu, national Jesuit honor society.

He is a member of: American Medical Association, Missouri State Medical Association, American College of Radiology, Radiology Society of North America, St. Louis Pediatric Society, Society for Nuclear Medicine and St. Louis Medical Society. He is vice president of the Radiology Society.

A native of Penacook, New Hampshire, he attended St. Anselm's College in Manchester, New Hampshire, when he was on honor student. He left there to enter the U. S. Army in 1943.

Dr. Brodeur, who is 40 years of age, is married and the father of six children: Armand, Jr., 13; Gary, 12; Mark, 9; Mariette, 4; Michelle, 2 and Paul Francis, 1 month. He resides at 141 Horseshoe Drive, Kirkwood.

### Grant

The School of Medicine has been awarded a grant of $640,597 for a seven-year period for the establishment of a center for cardiovascular research. Dr. Theodore Cooper, assistant professor of surgery, has been named director of the center. Dr. Cooper holds both a doctor of medicine and doctor of philosophy degree in physiology. First year funds from the grant award include $106,050 for the alteration of operating rooms, cardiac catherization laboratory and cardiology facilities at Firmin Desloge Hospital. A peripheral vascular laboratory and an electronic laboratory are being developed at the School of Medicine.

The renovations will facilitate research on various forms of acquired and congenital heart disease and diseases of arteries and veins. Various methods of medical and surgical treatment will be evaluated. The center will initiate a long-range program to assess the role of the nervous system in the development of heart and blood vessel diseases.

Emphasis will be placed on the response of the heart and blood vessel to the stress of increased environmental heat. This portion of the program will be conducted in a climate controlled laboratory in the physiology department and in the heart catheterization laboratory of the department of internal medicine.

A recording station will be installed in the operating rooms at Firmin Desloge Hospital so that more complete measurements of the performance of the heart and blood vessels may be made during heart surgery. The condition of the patient will be monitored continuously in the recording station and the information will be flashed on a screen for guidance of the surgical team.

The program will encompass many problems carried out by different investigators and will integrate the information obtained by research workers currently studying cardiovascular diseases with varying technics.

Principal investigators in the program besides Dr. Cooper will be Dr. C. Rollins Hanlon, director of the Department of Surgery; Dr. Alrick B. Hertzman, director of the Department of Physiology, and Dr. Rene Wegria, director of the Department of Internal Medicine.

The pooling of scientific data gathered in the interdisciplinary program will prevent duplication of endeavor on the part of the medical scientists. In addition to the stimulation and correlation of work by research workers, the program will give physicians in training a broader view of all aspects of cardiovascular disease. The trainees will participate in the program under the supervision of their respective departmental directors.

## UNIVERSITY OF MISSOURI

### AOA Initiates New Members

Seven upperclassmen of the University of Missouri School of Medicine were recently initiated into the Gamma Missouri Chapter of Alpha Omega Alpha, national honor medical society.

The initiates are: Fourth-year students, William Shell, Dexter; Richard Shepherd, Kansas City; James Harms, Salisbury, and Al Cross, Columbia. Third-year students are: Larry Toalson, Farmington; Michael Kowertz, Warsaw, and Bill Lauderdale, Eldon.

Dr. Thomas Burns, associate professor of medicine, is chapter councilor, and Dr. Gwilym S. Lodwick, professor and chairman of the department of radiology and associate dean of the School of Medicine, is secretary.

### Meetings

A seminar on “Complications in Surgery” was held in the Medical Center Auditorium at the University of Missouri from 8 a.m. to 5 p.m. Jan. 25. The seminar was presented by the University School of Medicine and the Continuing Education Service in cooperation with the Missouri Academy of General Practice. R. T. Tidrick, M.D., professor and head of the department of surgery at the University of Iowa College of Medicine, was a guest member of the seminar faculty. Other seminar faculty members were members of the University School of Medicine staff.

Lectures were given on: “Complications of Surgery for Urinary Diversion,” by Ian M. Thompson, M.D., professor of surgery (urology), and Gilbert Ross Jr., M.D., professor of surgery (urology); “The Immediate Post-Anesthetic Period,” by George W. N. Eggers Jr., M.D., associate professor of surgery (anesthesiology); “Complications of Ileostomies and Colostomies,” by Dr. Tidrick; “Neurologic Complications Following Emergency Treatment of Injuries of the Extremities,” by Warren P. Sights, M.D., assistant professor of surgery (neurosurgery), and Samuel P. Black, M.D., professor of surgery (neurosurgery); “Complications of Cataract Surgery,” by John T. Schwartz, M.D., assistant professor of surgery (ophthalmology); and “Retinal Detachment in the Post Surgical Cataract Patient,” by Felix N. Sabates, M.D., special resident fellow in surgery (ophthalmology) and head of retina service.

The afternoon program included a panel discussion on “Management of Postoperative Complications of Surgery for Cholecystitis and Duodenal Ulcer,” at which John J. Modlin, M.D., professor and chairman of surgery, moderated. Panelists were Carl H. Almond, M.D., assistant professor of surgery, John H. Landor, M.D., assistant professor of surgery, and Dr. Tidrick.

Kenneth K. Keown, M.D., professor of surgery (anesthesiology), presided at the seminar. Dean Vernon E. Wilson, M.D., of the School of Medicine, extended a welcome.

### Visitors

The series of lectures entitled “Special Topics in Biochemistry” presented by the School of Medicine was continued with a lecture January 12 by Daniel I. Arnon, professor of cell physiology and chairman of the department at the University of California at Berkeley. Dr. Arnon lectured on "Changing Concepts in Photosynthesis" in the Medical Center Auditorium. He has as his principal research interest in cellular physiology and biochemistry, with special reference to photosynthesis and energy conversion phenomena.

Robert E. L. Berry, M.D., associate professor of surgery, University of Michigan Medical Center, Ann Arbor, Mich., will visit the Medical Center here, department of surgery, March 12-14, 1962, as visiting professor of surgery. As part of three day stay at the department, Dr. Berry will participate in the weekly tumor conference, the weekly combined surgical staff conference and will conduct ward rounds for the surgical staff and medical students.

Paul Guggenheim, M.D., otolaryngologist, and Jack Drake, M.A., audiologist, from Council Bluffs, Iowa, visited the department of surgery December 19.

**Trips and Talks**

J. M. Martt, M.D., associate professor of medicine, will attend a meeting of the Southwest Clinical Society at the Trinity Hospital in Kansas City, March 12. This session is one of a group of clinic type meetings or workshop meetings sponsored by the Southwest Clinical Society. The subject of discussion will be "The Origin and Transmission of Heart Sounds and Correlation With Events in the Cardiac Cycle." Other meetings will be held in several of the Kansas City Hospitals.

Dr. Frank B. Engley Jr., professor and chairman of the department of microbiology, attended lectures on Aerospace Medicine in San Antonio, Tex., January 8 to 12, with Drs. Platner and Meyer of the department of physiology. The lectures were presented as part of the Medical Education for National Defense Program. The meeting was held at the School of Aerospace Medicine of the Air Force at Brooks AFB, Texas.

Dr. M. Pinson Neal, professor emeritus of pathology, and William Gaunt, M.D., assistant professor of medicine, attended a clinical pathologic conference from the University of Missouri Medical Center sponsored by the Pettis County Medical Society in Sedalia, January 17, which was attended by members from the eight mid-Missouri county medical societies. Dr. Neal was pathologist and Dr. Gaunt clinician at the conference. Hodgkin's disease was the topic of discussion.

Drs. Ernest E. McCoy, assistant professor, and George L. Baker, assistant instructor of pediatrics, attended a meeting of the American Association for the Advancement of Science December 29 and 30, 1961, in Denver, Colo. The first day of the meeting was devoted to the current ideas in the control of genetic information by the DNA molecule. The second day was spent on discussion of certain genetic human diseases. Attendance was approximately 400.

Dr. B. A. Westfall, professor and chairman of the department of physiology and pharmacology, and Dr. R. L. Russell, associate professor of pharmacology, have received a continuation of their grant from the NIH for $15,060 for one year to continue their research entitled, "Pharmacology of Some Plants Indigenous to Missouri."

Dr. W. S. Platner, professor of physiology, has been granted $100 for organizing data, drawing charts and graphs, on the problem dealing with glycogen fractions in hypothermia, from the University Research Council.

Dr. Russell has received an NSF Cooperative Fellowship Grant in the amount of $500 for the purchase of a stereotaxic apparatus for use in his research.

Dr. D. K. Meyer, professor of physiology, and Dr. Platner attended an Aerospace meeting January 8 to 12 at the School of Aerospace Medicine at Brooks AFB in San Antonio, Tex.

Dr. M. L. Zatzman, associate professor of physiology, attended a meeting on the plasma membrane, sponsored by the New York Heart Association, which was held at the Waldorf Astoria Hotel in New York City, in December.

Dr. Solomon Garb, associate professor of pharmacology, returned recently from a trip to Washington, D. C., to negotiate a research contract with the National Cancer Institute.

Mr. George Albert Hedge, Gregory fellow and a graduate student in pharmacology, working with Dr. Robert L. Russell, has accepted an invitation to work this summer in Bethesda, Md., under the direction of James O. Davis, M.D., Chief, Section on Experimental Cardiovascular Disease, National Heart Institute, Bethesda, Md. Mr. Hedge will return to the University of Missouri in the fall to continue his training in pharmacology.

Dr. Fernando Tapia, M.D., attended a meeting of the Communicable Disease Center Training

Branch, MSPHS, at the St. Louis County Health Department January 11. Psychotherapeutic Aspects of Nursing Relationships was discussed, to correlate some nursing activities with actual psychotherapy implications. Dr. Tapia is assistant professor of child psychiatry.

Dr. John Modlin, professor and chairman, department of surgery, attended the meeting of the Credentials Committee of the American College of Surgeons in St. Louis on January 2.

Ned Rodes, M.D., clinical assistant professor of surgery, was guest professor for the combined surgical staff conference on January 3. Dr. Rodes conducted rounds for the house staff and medical students.

C. Stuart Exon, M.D., clinical assistant professor in surgery, was guest professor for the combined staff conference January 10. Dr. Exon also conducted rounds for the house staff and medical students.

Dr. Hugh E. Stephenson Jr., professor of surgery, was allotted $900 from the Missouri Heart Association for the completion of a heart movie "A Panorama of Cardiovascular Surgery." Dr. Stephenson narrated a film "Cardiac Surgery and the Operating Room Nurse" to the Nursing Service Group and Operating Room Staff, January 5, at the Medical Center.

## WASHINGTON UNIVERSITY

### Pediatric Center

A Pediatric Clinical Research Center will be established in St. Louis Children's Hospital. The new unit, which will be administered and staffed by Washington University School of Medicine, will provide facilities for hospitalization and carefully controlled study of children with unique or unusual medical problems, especially those related to metabolic defects. The center will be financed through a United States Public Health Service grant that has initially provided $204,281 for renovation of a portion of the third floor of Children's Hospital, new equipment and supplies and salaries of the specialized personnel. The children's center will function as a subdivision of the adult Clinical Research Center that was established in 1960 in Barnard Free Skin and Cancer Hospital, under the direction of Dr. David M. Kipnis, assistant professor and Markle Scholar in medicine. Assisting Dr. Kipnis in the administration of the children's center will be Dr. Hulda J. Wohltmann, assistant professor of pediatrics. The adult center is also supported by a Public Health Service grant, which was scheduled to provide more than one and one half million dollars over the five year period of 1960 to 1965, and will now be increased annually to assume needs of the pediatric extension.

### Grants and Gifts

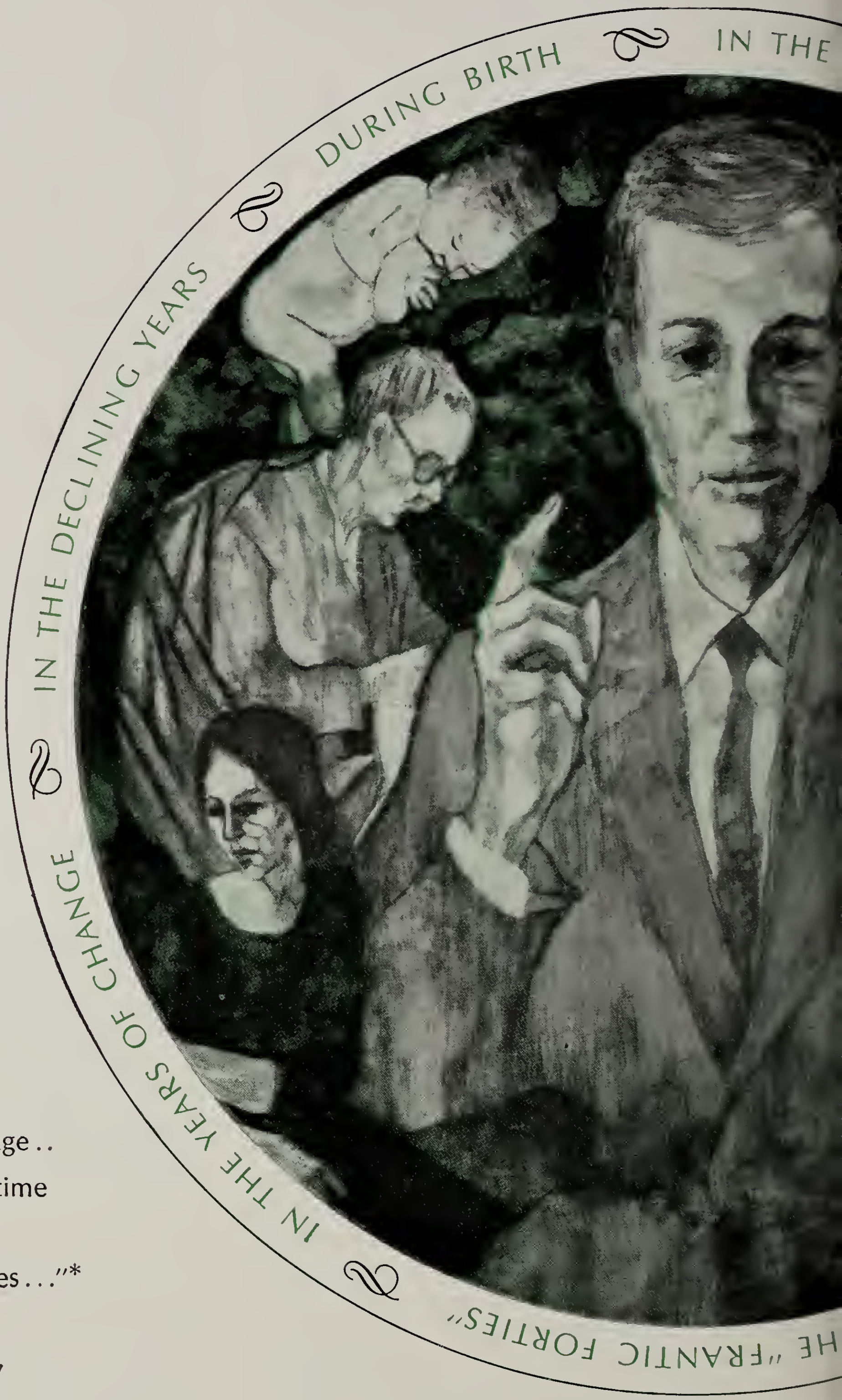
The Sunnen Foundation of St. Louis, through Mr. Joseph Sunnen, president of the board of directors, has awarded a $250,000 grant to Dr. William H. Masters, director of the Division of Reproductive Biology of the Department of Obstetrics and Gynecology at Washington University School of Medicine. Mr. Sunnen, St. Louis manufacturer and philanthropist, presented the gift as a primary contribution toward the support of a broad program of research in the total field of reproduction. In acknowledging the grant, Dr. Masters said the funds will be used for development of the necessary physical facilities to permit increase in depth and breadth of the division's present research program. A research center is to be established which will enable such widely diverse disciplines as biochemistry, physiology, psychiatry, psychology and the social sciences to integrate their studies of problems within the total field of reproductive biology.

Washington University School of Medicine has received $289,104 in research support grants from the U. S. Public Health Service. The award was one made to schools of medicine, dentistry and osteopathy throughout the country under the new General Research Support Grant program of the National Institutes of Health. The support funds will be used for maintenance of research resources such as animal facilities, for personnel, for some research training projects, including student research grants and project grants for less than $2,000 a year. Grants to individual investigators above $2,000 will not be affected by the general support grant.

The biochemistry department of the School of Medicine was awarded $3,000 by the du Pont corporation as part of the company's $1,690,000 program of aid to education. A total of 161 colleges and universities received funds under the program. Other awards were made to the department of chemistry and to aid undergraduate teaching of scientific and engineering subjects.

### Lectures and Meetings

A symposium on insulin, moderated by Dr. Carl Cori, professor and head of the department of biochemistry, was held as the February meeting of the Washington University Medical Society. Dr. Joseph H. Williamson, senior trainee in experimental pathology, presented a paper on


DURING BIRTH
IN THE
HE "FRANTIC FORTIES"
IN THE YEARS OF CHANGE
IN THE DECLINING YEARS

"All the world's a stage..
And one man in his time
plays many parts,
His acts being seven ages..."*

**As You Like It*, Act II, Sc. 7

IN THE EMOTIONAL TEENS
IN PREGNANCY AND A

through all seven ages of man

VISTARIL®

effective anxiety control
with a wide margin of safety

**in the "frantic forties"**—For many patients in their "frantic forties," the pace never slackens—may even accelerate—while tensions multiply and physical resources dwindle. Out of this seedbed of stresses and anxieties grow much of the alcoholism, psychosomatic illness, and sympathetic overactivity of the middle years.

In each of these areas, VISTARIL is often effective alone or as an adjunct to other therapy. For example, in his series of 67 patients, King[1] found that 62 showed remission of anxiety, tension, nervousness and insomnia, as well as alleviation of symptoms associated with various functional and psychophysiological disturbances. He concludes that VISTARIL is well suited for use in the practice of internal medicine.

In the emergent situation, VISTARIL, administered parenterally, is a valuable aid to the physician in managing patients who escape psychic conflict via alcohol. According to Weiner and Bockman,[2] who obtained beneficial results in 81% of 175 patients studied, hydroxyzine (VISTARIL) may well be considered a tranquilizer of choice in the management of the acutely agitated alcoholic.

1. King, J. C.: Int. Rec. Med. 172:669, 1959. 2. Weiner, L. J., and Bockman, A. A.: Sci. Exhibit, A.M.A., Ann. Meet., New York City, June 26-30, 1961.

VISTARIL® CAPSULES AND ORAL SUSPENSION
HYDROXYZINE PAMOATE

VISTARIL® PARENTERAL SOLUTION
HYDROXYZINE HYDROCHLORIDE

*Science for the world's well-being®* Pfizer PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
New York 17, New York

See "IN BRIEF" on the next page

IN BRIEF VISTARIL®

VISTARIL, hydroxyzine pamoate (oral) and hydroxyzine hydrochloride (parenteral solution), is a calming agent unrelated chemically to phenothiazine, reserpine, and meprobamate.

VISTARIL acts rapidly in the symptomatic treatment of a variety of neuroses and other emotional disturbances manifested by anxiety, apprehension, or fear—whether occurring alone or complicating a physical illness. The versatility of VISTARIL in clinical indications is matched by wide patient range and a complete complement of dosage forms. The calmative effect of VISTARIL does not usually impair discrimination. No toxicity has been reported with the use of VISTARIL at the recommended dosage, and it has a remarkable record of freedom from adverse reactions.

**INDICATIONS:** VISTARIL is effective in premenstrual tension, the menopausal syndrome, tension headaches, alcoholic agitation, dentistry, and as an adjunct to psychotherapy. It is recommended for the management of anxiety associated with organic disturbances, such as digestive disorders, asthma, and dermatoses. Pediatric behavior problems and the emotional illnesses of senility are also effectively treated with VISTARIL.

**ADMINISTRATION AND DOSAGE:** Dosage varies with the state and response of each patient, rather than with weight, and should be individualized for optimum results. The usual adult oral dose ranges from 25 mg. t.i.d. to 100 mg. q.i.d. Usual children's oral dose: under 6 years, 50 mg. daily in divided doses; over 6 years, 50-100 mg. daily in divided doses.

Parenteral dosage for adult psychiatric and emotional emergencies, including acute alcoholism: I.M.—50-100 mg. Stat., and q.4-6h., p.r.n. I.V.—50 mg. Stat., maintain with 25-50 mg. I.V. q.4-6h., p.r.n.

**SIDE EFFECTS:** Drowsiness may occur in some patients; if so, it is usually transitory, disappearing within a few days of continued therapy or upon reduction of dosage. Dryness of mouth may be encountered at higher doses.

**PRECAUTIONS:** Drowsiness may occur in some patients. The potentiating action of hydroxyzine should be taken into account when the drug is used in conjunction with central nervous system depressants. Do not exceed 1 cc. per minute I.V. Do not give over 100 mg. per dose I.V. Parenteral therapy is usually for 24-48 hours, except when, in the judgment of the physician, longer-term therapy by this route is desirable.

**SUPPLIED:** VISTARIL *Parenteral Solution* (hydroxyzine hydrochloride)—10 cc. vials, 25 mg. per cc. and 50 mg. per cc.; 2 cc. ampules, 50 mg. per cc. VISTARIL *Capsules* (hydroxyzine pamoate)—25, 50, and 100 mg. VISTARIL *Oral Suspension* (hydroxyzine pamoate)—25 mg. per 5 cc. teaspoonful.

*More detailed professional information available on request.*

*Science for the world's well-being®*

Pfizer PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
New York 17, New York

"Secretory Granules of the Beta Cells." Dr. Paul E. Lacy, Mallinckrodt professor and head of the department of pathology, was coauthor. Studies on the effect of sugars on pancreatic insulin release were reported by Dr. Lillian Recant, associate professor of medicine and of preventive medicine. Coauthors were Rita A. Bailey, Dr. Charles Kilo, Dr. Charles L. Long Jr., and Mary Koch. Dr. Cori reported on glucose load and utilization, a paper coauthored by Dr. Richard A. Field of Harvard University. Dr. David M. Kipnis, assistant professor and Markle scholar in biochemistry in medicine, presented a paper on insulin antagonists. Dr. Williamson and Dr. Lacy assisted in the preparation. Binding of insulin in vascular lesions in diabetes was discussed by Dr. Herman T. Blumenthal, director in the Institute of Experimental Pathology at The Jewish Hospital of Saint Louis, and Aline Berns.

Most recent meeting of the History of Medicine Society heard the work of E. J. Marey, 19th century French physiologist, discussed by Mr. G. S. T. Cavanaugh, librarian at the University of Kansas Medical Center. Dr. L. R. C. Agnew, professor of the history of medicine at the Kansas Medical School, spoke on obtaining historical material from primary sources.

Dr. Bernard D. Davis, professor and head of the department of bacteriology and immunology at Harvard Medical School, recently presented a lecture on "Cellular Control of Biosynthetic Processes." Dr. Davis's lecture was sponsored by the department of microbiology.

### Faculty Activities

Dr. Quentin Rae Grant, assistant professor of child psychiatry, has assumed his duties as director of mental health in the St. Louis County Health Department. Dr. Grant was formerly assistant director of children's psychiatric services and instructor of pediatrics and psychiatry at Johns Hopkins University. He had been clinical director of Jewish Hospital, St. Louis, before going to Johns Hopkins in 1960.

Dr. Herman N. Eisen, professor and head of the department of microbiology, presented a seminar in February at Johns Hopkins School of Medicine. His topic was "Antigenic Determinants of Hypersensitive Responses."

Dr. E. James Anthony, Blanche F. Ittleson professor of child psychiatry, recently visited London on behalf of the National Institute of Mental Health. Dr. Anthony is a member of the study section and research grants committee of the NIMH. He visited the Hampstead Clinic, a child therapy unit, which is under the direction of Miss Anna Freud, daughter of Sigmund

**The Neurological Hospital**

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Kansas City 8, Missouri
Harrison 1-0623

★ ★ ★

A voluntary, nonprofit facility for the treatment of acute psychiatric disorders, alcoholism, drug addiction; and the long term care of the geriatric patient.

**CAMP**

**surgical supports**

complete stock for men & women

- graduate fitters
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**HAMILTON-SCHMIDT SURGICAL COMPANY**

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Surgical Instruments, Invalid and Sick Room Supplies
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**ST. VINCENT'S HOSPITAL** SAINT LOUIS 33, MISSOURI

A 290-bed private, non-profit, neuropsychiatric hospital, located in suburban St. Louis; offering all accepted psychiatric therapies and the essential diagnostic services of a general hospital; featuring an extensive professionally-directed Occupational Therapy program.

BROCHURE AND RATE SCHEDULE ON REQUEST

P. E. Kubitschek, M.D.
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Sister Juliana, R.N.
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*Accredited by Joint Commission on Accreditation of Hospitals*

- All psychiatric disorders
- Active treatment geriatrics
- Limited custodial care
- Selected cases of alcoholism
- Three full-time psychiatrists, plus psychiatric staff of 25
- 24-hour medical service, plus consulting staff of 29
- 1:1.76 ratio of nursing staff to patients, including 40 RN's

Owned and operated by THE DAUGHTERS OF CHARITY OF ST. VINCENT DE PAUL

**ACCIDENT AND HEALTH INSURANCE**

The Missouri State Medical Association since 1943 has made available to its members a Special Disability Income Benefits Policy issued by our "Loyalty Group" Companies now a part of the America Fore-Loyalty Group Insurance Companies—the largest casualty-fire underwriting group in the world. The low cost at which the policy is offered is made possible through the purchasing power of the membership of your association as a whole.
*Now, new plans offering long term income benefits as well as a special Major Hospital-Nurse Expense Plan have been added to the program.* We suggest you who are already enrolled make sure your policy includes the maximum benefits. Those of you not enrolled, we suggest you do so today. Call or Write:

**Eggert-Carroll-Schroeder Agency, Inc.**
111 North Fourth St., St. Louis 2, Mo.
(Eastern Missouri Administrators)

**Altman-Singleton & Co.**
114 W. 10th St., Kansas City 5, Mo.
(Western Missouri Administrators)

Dr. Edward W. Dempsey, Dean, accepts memorial portrait of Dr. Ernest Sachs, as Dr. Ernest Sachs, Jr. and Mrs. Sachs look on.

Freud. The clinic is applying for a support grant from the U. S. Public Health Service.

**Memorial**

A memorial portrait of Dr. Ernest Sachs, first professor of neurological surgery at Washington University, was presented to the School of Medicine recently. The memorial is a gift of 1930 alumni and physicians who trained under Dr. Sachs. Mrs. Ernest Sachs, wife of the late neurosurgeon, and Dr. Ernest Sachs Jr., also a neurosurgeon, of Hanover, N. H., attended the unveiling of the portrait. In 1919 Dr. Sachs became the first professor of neurological surgery in the world, a position which Washington University created for him. He had joined the faculty in 1911 after postgraduate study in Europe and graduation from Harvard University and Johns Hopkins School of Medicine. Dr. Sachs served as clinical professor of neurological surgery until his retirement in 1946. He left St. Louis in 1949 and served as research associate in physiology and the history of medicine at Yale University School of Medicine until his death in 1958.

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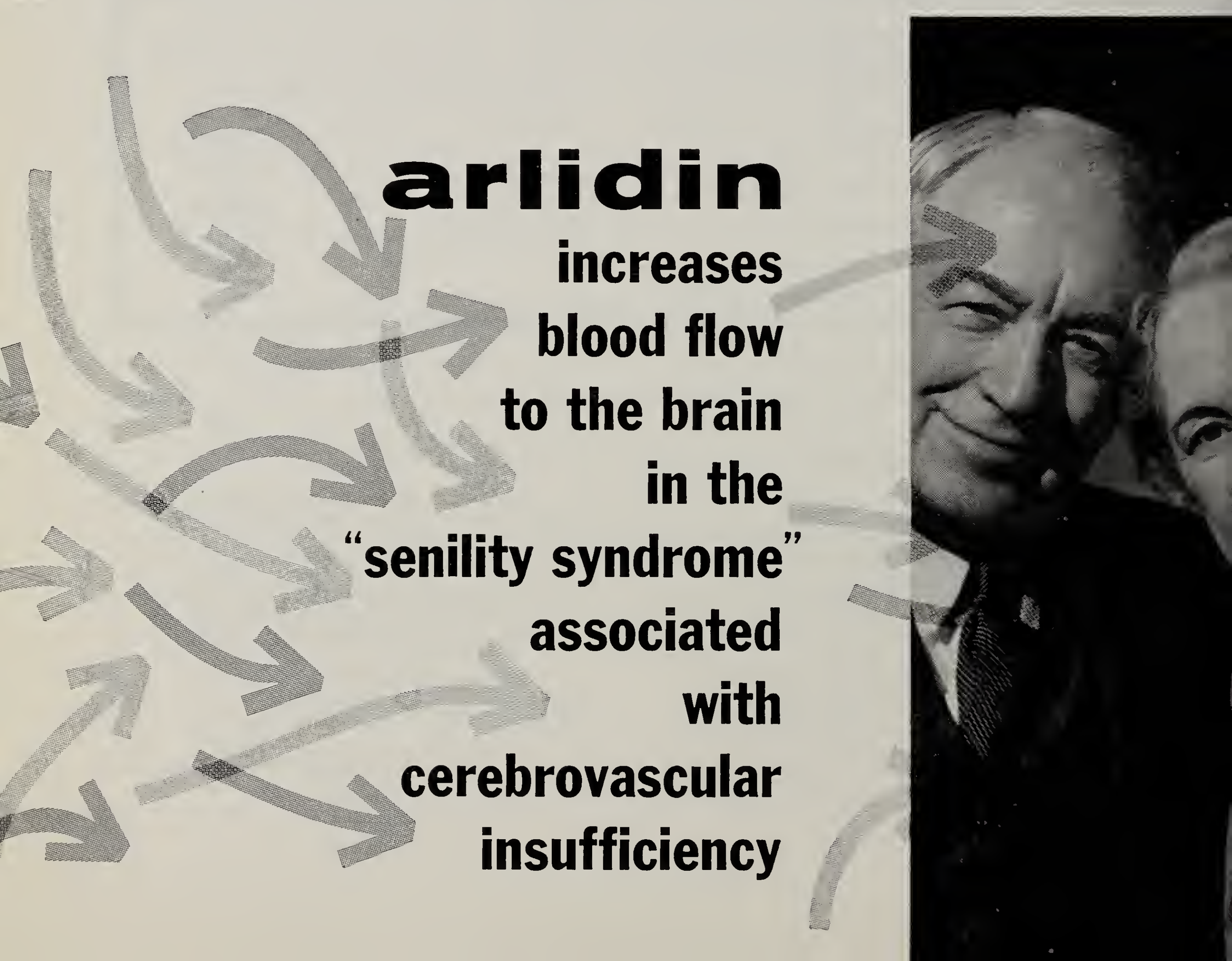
## MISSOURI ACADEMY OF GENERAL PRACTICE

*(Continued from page 206)*

Hotel in Jefferson City on Sunday, December 10, to develop the scientific program for the 1962 Annual Assembly of the Missouri Academy of General Practice, to be held at Hotel Chase in St. Louis on Saturday and Sunday, November 3 and 4.

Committee members present included Drs. McCraw, Wyeth Hamlin, Hannibal; Walter Stelmach, Kansas City; Robert Tanner, Jefferson



City; A. G. Karraker, Farmington, and W. A. Mullarky, St. Louis.

The committee agreed to follow the same general pattern of annual assemblies which have been held in recent years, that is, to hold four symposia: one on Saturday morning, November 3; another on Saturday afternoon, another Sunday morning, November 4; and the final session Sunday afternoon. At the close of each symposium a panel discussion with questions from the audience, directed at the respective speakers, will be continued. The format of the scientific program as decided upon is as follows: Saturday morning, Symposium on Adolescent Medicine; Saturday afternoon, a Symposium on Office Orthopedic Problems; Sunday morning, a General Session; Sunday afternoon, a Symposium on Peripheral Vascular Disease. Both in-state and out-state speakers will be solicited for the symposia.

The committee also considered holding another one day conference on "Medical Economics" in the summer of 1962 similar to the one held in the summer of 1961 at Arrowhead Lodge on the Lake of the Ozarks. Consideration is being given to St. Louis for the site of the 1962 conference in order to take advantage of such attractions as adequate air conditioned facilities, the St. Louis zoo, Forest Park Highlands, major league baseball, Municipal Opera, and other attractions.

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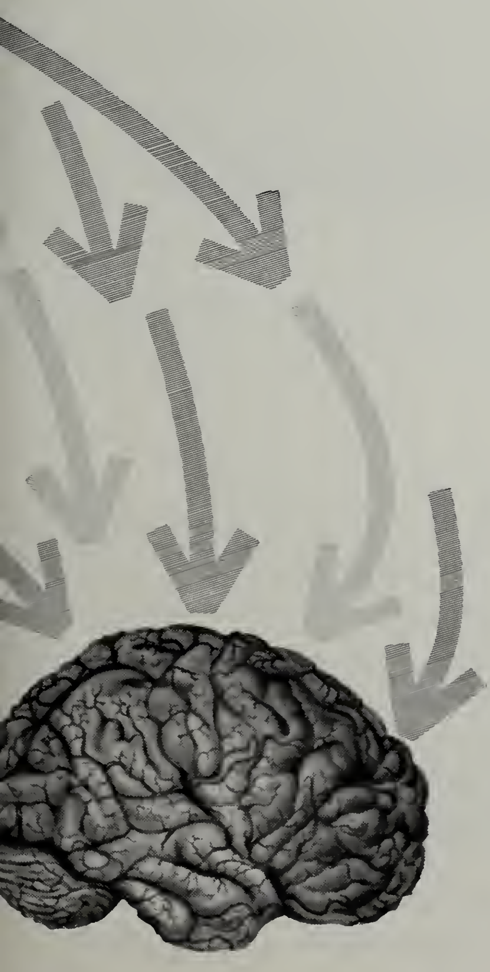
## WASHINGTON

*(Continued from page 198)*

### White House Conference

In a *Report to the President White House Regional Conferences,* issued in November 1961, in an article titled "Better Opportunities for Health and Welfare," the following paragraph appears: "In St. Louis, Dr. R. O. Muether, past president of both the St. Louis and Missouri Medical Associations and president of the local Blue Shield Insurance Plan, called the administration's legislation a direct affront to the independence of old people. Of the cards sent from St. Louis to President Kennedy, 49 of the 53 opposing medical care under Social Security were signed by doctors."

On the page opposite of the Report is a picture of Secretary of Health, Education, and Welfare Abraham Ribicoff speaking at the session devoted to "Opportunities for Senior Citizens" in St. Louis.



Inadequate cerebral blood flow—often due to cerebral arteriosclerosis—may result in the "senility syndrome" with its pattern of mental confusion, memory lapses, depression, fatigue, apathy and behavior problems.[1-3]

**43% increase in cerebral blood flow with Arlidin[4]**

In patients with cerebrovascular insufficiency, Eisenberg[4] measured a 43 percent increase in blood flow in the brain following administration of Arlidin orally for more than two weeks beginning with a dosage of 12 mg. t.i.d. and increasing to 18 mg. t.i.d. There was a decrease in cerebral vascular resistance in most instances.

Winsor and associates[3] found Arlidin "of particular value clinically in relieving some of the symptoms of cerebral vascular insufficiency (vertigo, lightheadedness, mental confusion, diplopia)."

**arlidin®**

(BRAND OF NYLIDRIN HCl NND)

**references:** 1. Madow, L.: Penn. M. J. 62:861, June 1959. 2. Stieglitz, E. J.: Geriatric Medicine, ed. 2, Philadelphia, Saunders, 1949 p. 274. 3. Winsor, T., et al.: Amer. J. Med. Sciences 239:594, May 1960. 4. Eisenberg, S.: ibid, July 1960.

NOTE—before prescribing ARLIDIN the physician should be thoroughly familiar with general directions for its use, indications, dosage, possible side effects and contraindications, etc. Write for complete detailed literature.

**u. s. vitamin & pharmaceutical corporation**

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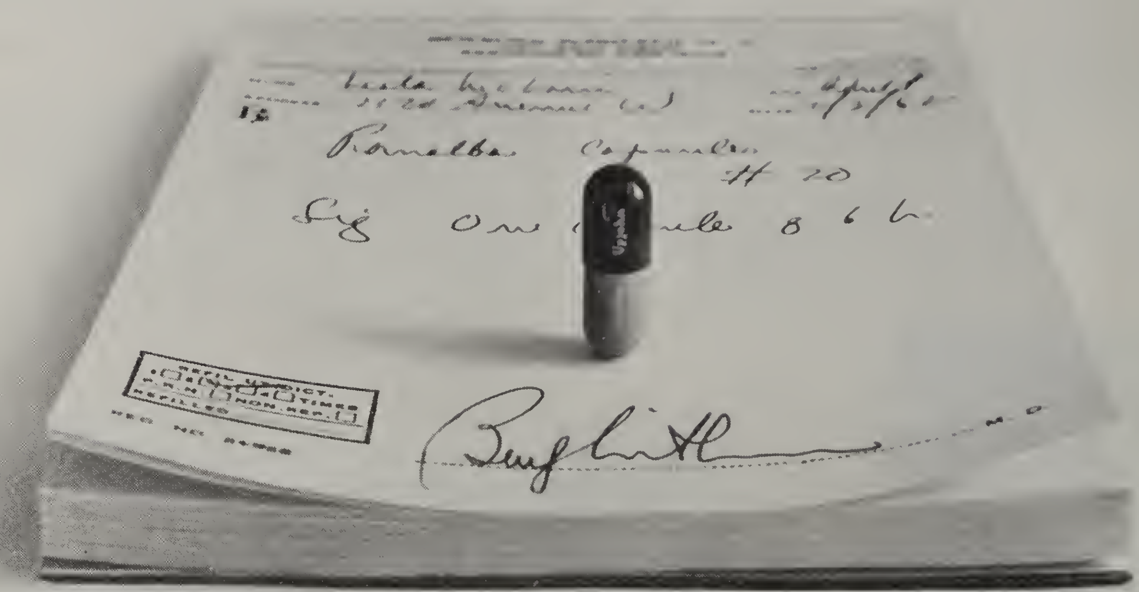

# *Launching Pad*

In infections of unknown etiology, prescribe Panalba. From the outset, pending laboratory determinations, your treatment is broadened in antibacterial coverage because of the simultaneous administration of two antibiotics that complement each other. They were carefully chosen for this purpose.

Panalba combines tetracycline (selected for its breadth of coverage) and novobiocin (selected for its unique effectiveness against staph). That is why, in most infections of unknown etiology, Panalba offers excellent chances for therapeutic success— and why it should be your antibiotic of first resort.

**Upjohn**

The Upjohn Company
Kalamazoo, Michigan

**Panalba* product information**

*Supplied:* Capsules, each containing Panmycin* Phosphate (tetracycline phosphate complex), equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin,* as novobiocin sodium, in bottles of 16 and 100.

*Usual Adult Dosage:* 1 or 2 capsules three or four times a day.

*Side Effects:* Panmycin Phosphate is well tolerated clinically and has a very low order of toxicity comparable to that of the other tetracyclines. Side reactions are infrequent and consist principally of mild nausea and abdominal cramps.

Leukopenia has occurred occasionally in patients receiving novobiocin. Rarely, other blood dyscrasias including anemia, pancytopenia, agranulocytosis and thrombocytopenia have been reported. In a recent report it was observed that three times as many newborn infants receiving novobiocin developed jaundice as control infants. For this reason, administration of novobiocin to newborn and young infants is not recommended, unless indication is extremely urgent because of serious infections not susceptible to other antibacterial agents.

The development of jaundice has also been reported in older individuals receiving Albamycin. Serious liver damage has developed in a few patients, which was more likely related to the underlying disease than to therapy with novobiocin. Although reports such as the above are rare, discontinuance of novobiocin is indicated if jaundice develops. If continued therapy appears essential because of a serious infection due to microorganisms resistant to other antibacterial agents, liver function tests and blood studies should be performed frequently, and therapy with novobiocin stopped if necessary.

In a certain few patients treated with this agent, a yellow pigment has been found in the plasma. The nature of this pigment has not been defined. There is evidence that it may be a metabolic by-product of novobiocin, since it has been reported to be extractable from the plasma (pH 7 to 8.1) with chloroform while bilirubin is not. These properties have been employed to differentiate the yellow pigment due to the metabolic by-product of novobiocin and bilirubin. However, recent reports indicate that this method of differentiation may be unreliable.

Urticaria and maculopapular dermatitis have been reported in a significant percentage of patients treated with Albamycin. Upon discontinuance of the drug, these skin reactions rapidly disappeared.

*Warning:* Since Albamycin possesses a significant index of sensitization, appropriate precautions should be taken in administering the drug. If allergic reactions develop during treatment and are not readily controlled by antihistaminic agents, use of the product should be discontinued.

Total and differential blood cell counts should be made routinely during the administration of Albamycin. If new infections appear during therapy, appropriate measures should be taken; constant observation of the patient is essential. If a yellow pigment appears in the plasma, administration of the drug should be continued only in urgent cases, and the patient's condition closely followed by frequent liver function tests. In case of the development of liver dysfunction, therapy with this agent should be stopped.

*TRADEMARK, REG. U. S. PAT. OFF.
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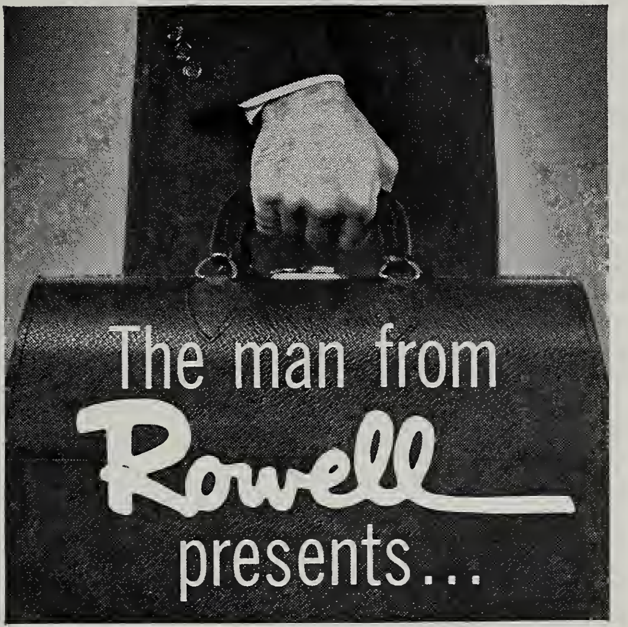

**VIO-DEX**
**VIO-DEX TIMELETS**
**VIO-DEXOSE**

A family of obesity-control aids combining appetite control and nutritional supplementation. Four dosage forms from which to choose; each containing dextroamphetamine with a barbiturate to prevent excessive central stimulation, and vitamins to supplement the restricted diet:

**Vio-Dex,** introduced in 1950, is now a standard in obesity-control therapy.

**Vio-Dex Timelets** offer sustained release of dextroamphetamine. One Timelet in the morning lasts all day. Available in 10 mg. and 15 mg. dosage forms.

**Vio-Dexose** chewable tablets, with dextrose and dextroamphetamine, provide a dual attack on hunger and allow dosage flexibility.

**Contraindications:** Prepsychotic anxiety and agitation, and hypersensitivity to sympathomimetic agents. Use with caution in patients with cardiovascular disease.

**Side Effects:** Seldom encountered, include nervousness and insomnia. (Rx only)

| Formulation: | Vio-Dex Red & Yellow Capsule† | Vio-Dex Timelets†† | Vio-Dexose Citrus Flavored Tablet†‡ |
|---|---|---|---|
| Dextro-Amphetamine Phosphate | 5.0 mg. | 10 mg.*,<br>15 mg.** | 2.5 mg. |
| Phenobarbital | 16 mg. | 32 mg. | .... |
| Mephobarbital | .... | .... | 8.0 mg. |
| Dextrose (9.4 cal.) | .... | .... | 2.5 mg. |
| Vitamin A | 5000 I.U. | 5000 I.U. | 1000 I.U. |
| Vitamin D | 1200 I.U. | 1200 I.U. | 100 I.U. |
| Vitamin B-1 | 3 mg. | 3 mg. | 0.5 mg. |
| Vitamin B-2 | 3 mg. | 3 mg. | 0.5 mg. |
| Vitamin B-6 | 1 mg. | 1 mg. | 0.15 mg. |
| Vitamin C | 100 mg. | 100 mg. | 15 mg. |
| Vitamin E | 1 I.U. | 1 I.U. | .... |
| Niacinamide | 20 mg. | 20 mg. | 3 mg. |
| Calcium Pantothenate | 2 mg. | 2 mg. | 0.3 mg. |

*Orange, coated tablets **Brown, coated tablets ††1 a day
†1 before each meal †‡1 or 2 before or between meals

*For more facts, see your local Rowell man or write:*

Rowell LABORATORIES, INC.
BAUDETTE, MINNESOTA

**LEO H. POLLOCK, M.D.**

# Missouri Medicine in Review

## FORTY YEARS AGO

At the annual meeting of the State Board of Health held in Jefferson City, January 10, the following officers were elected: Dr. R. S. Vitt, St. Louis, president; Dr. E. E. Brunner, Farmington, vice-president; Dr. Cortez F. Enloe, Jefferson City, reelected secretary and State Health Commissioner.

The superintendents of the reputable hospitals in Missouri are planning the organization of an association of hospital superintendents to be affiliated with the American Hospital Association. Dr. L. H. Burlingham, superintendent of the Barnes Hospital, St. Louis, is chairman of the committee on temporary organization and Dr. R. E. Castelaw, superintendent of the Christian Church Hospital, Kansas City, is secretary of the committee.

In response to a call issued by the special committee of the Missouri State Pediatric Society appointed the year before, several physicians interested in pediatrics met at Hotel Robideaux, St. Joseph, May 26, 1921. The physicians present unanimously decided to organize themselves into a body known as the Missouri State Pediatric Society. The following physicians were present: E. W. Saunders, St. Louis; John Zahorsky, St. Louis; E. H. Schorer, Kansas City; Damon Walthall, Kansas City; O. B. Hall, Warrensburg; John D. Seba, Bland; R. F. Mills, Odessa; R. R. Haley, Brookfield, W. S. Wood, Oregon; J. M. Davis, Craig.

The International Health Board has accepted an invitation to cooperate in carrying out the general scheme of reorganization of the public health activities of the Philippine Islands, which was recently made public by the President of the Senate, Manuel Quenzon. Dr. Victor G. Heiser, Director for the East of the International Health Board, and formerly Director of Health for the Philippine Islands, will go to Manila in February to assist in carrying out this extensive program.

## TWENTY-FIVE YEARS AGO

A memorial service was held for the late Dr. W. McKim Marriott, former dean of Washington University School of Medicine, at the Washington University Auditorium on January 3. Dr. Marriott died on November 11 in San Francisco where he had gone July 1, 1936, to become dean of the Medical School and director of Medical Research at the University of California.

Dr. Edwin H. Schorer, Health Director of Kansas City, has urged precautionary steps against smallpox spreading to Kansas City from St. Joseph and several communities in Kansas where the disease has been reported.

The Dallas-Hickory-Polk County Medical Society met in the High School Auditorium, Fair Play, at 2:30 p.m., January 5. A resolution concerning corporate practice approved by the St. Louis Medical Society, October 13, 1936, was submitted to the Society for its consideration. The Society voiced approval of the attitude of the St. Louis Medical Society and expressed a desire to assist in stamping out any attempt at corporate practice.

## TEN YEARS AGO

At least half of the nation's population was covered by some type of voluntary protection against the economic hazards of sickness and accident at the end of 1950, according to a recent report of the Health Insurance Council. The Council is made up of nine trade associations in the life insurance and casualty fields.

St. Louis City Hospital No. 1 Alumni Association will hold a dinner meeting at the time of the Annual Session of the Missouri State Medical Association.

Melvin A. Casberg, M.D., St. Louis, former dean of the St. Louis University School of Medicine, was appointed vice chairman of the Armed Forces Medical Policy Council on December 15 to become effective January 1, 1962. Dr. Casberg will serve as the principal assistant to the chairman, Dr. W. Randolph Lovelace.

THE ST. LOUIS SURGICAL SOCIETY

extends a cordial invitation to all members of the profession
*for the*

*Thirty-Eighth Hodgen Lecture*

JAMES D. HARDY, M.D.
Professor and Chairman, Department of Surgery, University of Mississippi

"WHY CANCER PATIENTS DIE
Systemic Effects of Non-endocrine Tumors"

Tuesday, March 6, 1962, 6:00 P.M.

St. Louis Medical Society Auditorium
3839 Lindell Boulevard

So pure ... So good ...
So wholesome for
everyone ... including
the tiniest tots!
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Nothing does it like Seven-Up!

# FINANCIAL STATEMENT FOR THE YEAR 1961

LENNERTSON & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS
214 SOUTH BEMISTON AVENUE

ST. LOUIS 5, MISSOURI

Missouri State Medical Association,
634 North Grand Blvd.,
St. Louis, Missouri

*Gentlemen:*

A review was made of the accounting records of the Missouri State Medical Association for the year 1961 and a report thereon is presented together with the following statements:

| | |
|---|---|
| Exhibit A | Balance Sheet |
| Exhibit B | Income Statement |
| Exhibit C-1 | Statement of Investments |
| Exhibit C-2 | Statement of Committee and Meeting Expenses |
| Exhibit D | Dues Receivable and Membership by Counties |

It should be noted that members' dues are taken into income on the cash basis whereas the other accounts are maintained on the accrual basis. Items paid in advance, except members' dues, are shown as prepaid and carried forward to the year to which they apply.

## Scope of Examination

The Balance Sheet at December 31, 1961, and the Income Statement for the year then ended were reviewed. Examinations or tests were made of the accounting records, in the manner and to the extent deemed appropriate, without making a detailed audit of the transactions.

Cash in banks, as shown by the books, was reconciled with the regular monthly bank statements and confirmations received from the depositaries. The petty cash fund of $25.00 was counted. Recorded cash receipts for the year were traced in total into the bank accounts as deposits and disbursements for the period were substantiated by an inspection of paid checks, purchase invoices and other data on file.

Investments with a cost of $131,491.11, listed in Exhibit C-1, were confirmed by a statement from the custodian, Mercantile Trust Company. Investment income of $5,142.98 consists of the following:

| | |
|---|---|
| Interest on bonds | $3,543.00 |
| Add—1961 Share of Net Discount on Purchase of Bonds | 680.78 |
| Income From Bonds | $4,223.78 |
| Dividends on Stocks | 919.20 |
| Total Investment Income | $5,142.98 |

During the year 1960, the Missouri State Medical Association appropriated $50,000 for the establishment of the Missouri State Medical Foundation. An additional appropriation of $25,000 was made in the current year. This fund is used for loans for the education of medical students who are Missouri residents.

## Income Statement

The financial result of the activities of the Association for the year 1961 was an excess of expense over income of $33,320.79 as set forth in Exhibit B. Exhibit C-2 presents a summary of committee and meeting expenses for the year.

Selective tests were made of the income and expense accounts for the period. It was noted that space in MISSOURI MEDICINE was contributed to the United States Treasury Department for bond advertising and to members and widows of members for small classified ads.

## Balance Sheet

The financial position of the Association at December 31, 1961, is presented in Exhibit A. Additional comments follow on Balance Sheet accounts.

Accounts Receivable—Advertisers $6,479.36, represented the unpaid balances due from advertisers. Of this amount $6,426.36 was due from the State Journal Advertising Bureau for the months of November and December 1961.

Unpaid Dues of $1,791.25, offset by a reserve account in like amount, represents 1961 dues of delinquent members carried at the requests of the local societies. Other delinquent members were dropped from membership in accordance with the by-laws. Exhibit D presents a summary of unpaid 1961 dues and membership by counties, as shown by the records of the Association.

Furniture and Fixtures continue to be stated in the fixed amount of $1,000. Equipment purchases and repairs in the total of $600.05 were charged to expense in lieu of depreciation.

Records and data on file were carefully reviewed for liabilities at December 31, 1961, and it is believed that all current liabilities of substantial amount are included in the Balance Sheet. The By-laws require the Association to furnish financial assistance, not to exceed $300, on each malpractice suit. The Association states that it has no knowledge of any pending suits against members.

During the year, payments were made to or for the Missouri State Medical Association Pension Trust as follows:

| | |
|---|---|
| Employees' Retirement Insurance Premiums | $4,494.65 |
| Employees' Pension Plan Contribution | 2,692.35 |
| Total | $7,187.00 |

Exhibitors have made advance payments of $4,138.75 for Annual Session exhibit space and these payments will be taken into income when earned in 1962.

## General

Insurance policies were inspected and the following general insurance was in force at the close of the year:

| *Insurance on* | *Type of Coverage* | *Amount* |
|---|---|---|
| Furniture and Fixtures | Fire and Extended Coverage (80 per cent co-ins.) | $6,500 |
| Employees | Workmen's Compensation | Statutory |
| Lessee's Liability | Bodily Injury | $25,000/50,000 |
| Treasurer | Fidelity Bond | $20,000 |
| Employees (except Vice President and Secretary) | Fidelity Bond | $5,000 |
| Automobiles of Executive Secretary, Field Secretary and Executive Assistant | Non-ownership—Bodily Injury | $50,000/100,000 |
| | Non-ownership—Property Damage | $5,000 |

Subject to the comments thereon, the attached statements, in our opinion, present fairly the financial position of the Missouri State Medical Association at December 31, 1961, and the financial results of its activities for the year then ended, in accordance with accepted principles of accounting applied on a basis consistent with that of the preceding year.

Yours very truly,
LENNERTSON & COMPANY
Certified Public Accountants.

EXHIBIT A

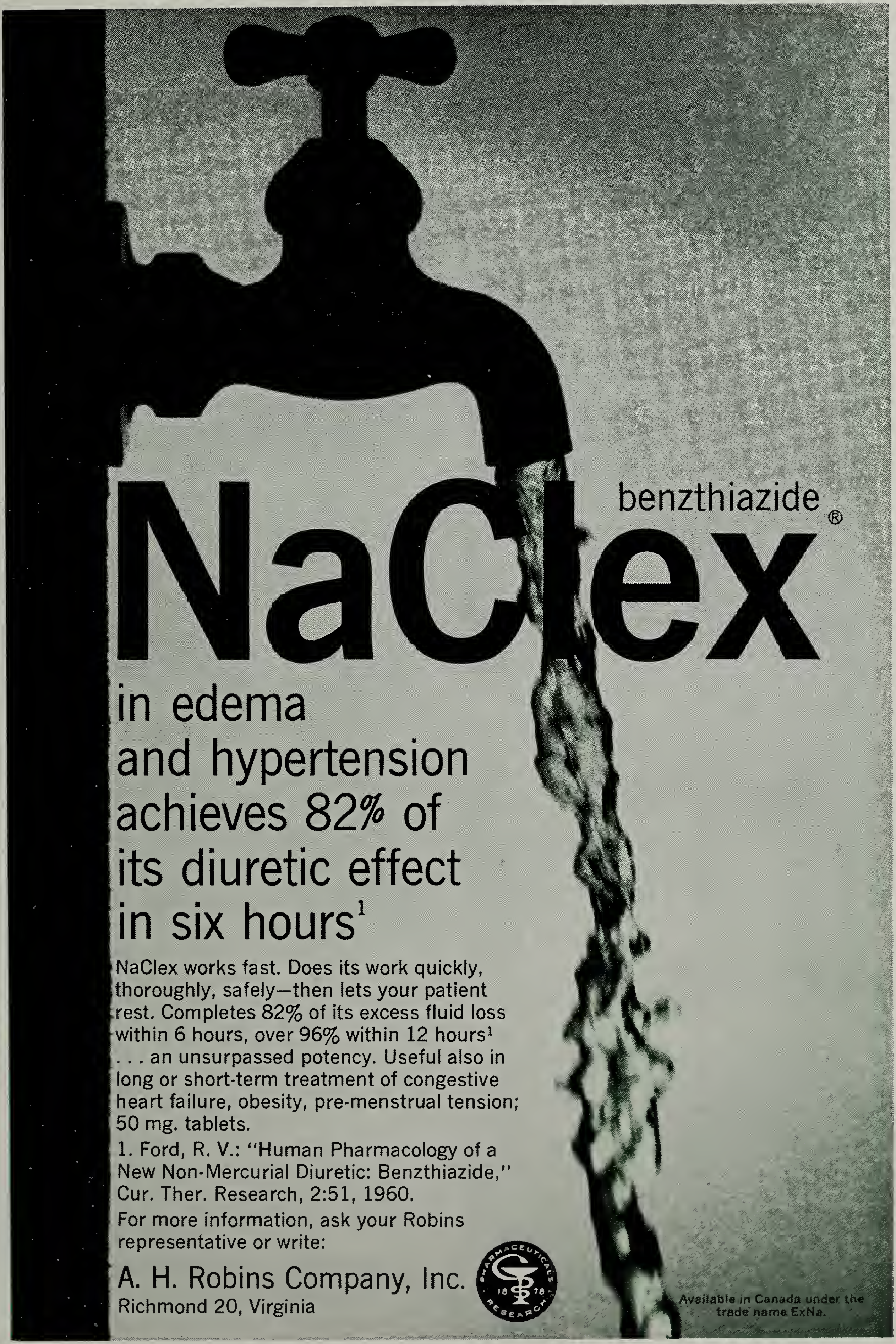
### Missouri State Medical Association
### Balance Sheet, December 31, 1961

*Assets*

| | | |
|---|---|---|
| *Cash* | | |
| Mercantile Trust Company (Treasurer's Account) | $ 1,164.09 | |
| Mercantile-Commerce National Bank (Secretary's Account) | 498.83 | |
| Petty Cash Fund | 25.00 | $ 1,687.92 |
| *Investments at Cost* (Exhibit C-1) | | |
| U. S. Government Bonds | $ 99,462.23 | |
| Corporate Bonds | 5,000.00 | |
| Common Stocks | 27,028.88 | |
| Total (Market Value $131,175.63) | | 131,491.11 |
| *Accounts Receivable* | | |
| Advertisers | $ 6,479.36 | |
| Mercantile Trust Company—Investment Custodian | 1,577.45 | 8,056.81 |
| Dues Receivable—Exhibit D | | 1,791.25 |
| Furniture and Fixtures (at stated value) | | 1,000.00 |
| Advances for Travel Expenses | | 547.16 |
| | | $144,574.25 |

*Liabilities*

| | | |
|---|---|---|
| *Accounts Payable* | | |
| Supplies and Expenses | $ 3,105.42 | |
| Payroll Taxes | 830.09 | $ 3,935.51 |
| *Deferred Credit to Income* | | |
| Advance Payments by Exhibitors | | 4,138.75 |
| Contingent Liability to Members on Malpractice Suits—None Reported | | |
| Reserve for Uncollected Dues | | 1,791.25 |
| *Reserve for Future Activities* | | |
| Balance January 1, 1961 | $168,029.53 | |
| Excess of Expenses Over Income for Year 1961 (Exhibit B) | 33,320.79 | 134,708.74 |
| | | $144,574.25 |



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1. Ford, R. V.: "Human Pharmacology of a New Non-Mercurial Diuretic: Benzthiazide," Cur. Ther. Research, 2:51, 1960.

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Exhibit B

## Missouri State Medical Association
## Income Statement for the Year 1961

| Particulars | General Activities | Publication | Total |
|---|---|---|---|
| *Income* | | | |
| Dues Received (includes $1.50 per member annually for The Journal) | $105,794.25 | $ 5,112.00 | $110,906.25 |
| Rentals—Annual Session Exhibit Space | 8,450.00 | | 8,450.00 |
| Subscriptions to The Journal—Nonmembers | | 310.00 | 310.00 |
| Advertising Space—The Journal | | 45,944.82 | 45,944.82 |
| Investments—Interest and Dividends | 5,142.98 | | 5,142.98 |
| Collection Fees on A.M.A. Dues | 791.13 | | 791.13 |
| Rental Income—Office Space | 540.00 | | 540.00 |
| Total Income | $120,718.36 | $51,366.82 | $172,085.18 |
| *Expenses* | | | |
| Salary—Executive Secretary | $ 10,800.00 | $ 5,400.00 | $ 16,200.00 |
| Office Salaries | 27,514.17 | 13,757.08 | 41,271.25 |
| Employees' Pension Plan Contributions | 7,187.00 | | 7,187.00 |
| Office Rent and Light | 4,547.59 | | 4,547.59 |
| Postage | 2,946.84 | 767.62 | 3,714.46 |
| Stationery, Printing and Office Supplies | 5,815.67 | | 5,815.67 |
| Dues and Subscriptions | 439.05 | | 439.05 |
| Directories and Clipping Service | 948.65 | | 948.65 |
| The Journal—Paper, Printing, etc. | | 31,245.29 | 31,245.29 |
| Cash Discounts to Advertisers | | 260.89 | 260.89 |
| Commissions on Journal Advertising | | 5,756.09 | 5,756.09 |
| Telephone and Telegraph | 2,445.03 | | 2,445.03 |
| Insurance—General | 310.00 | | 310.00 |
| Insurance—Blue Cross | 331.50 | | 331.50 |
| Professional Fees | 4,158.53 | | 4,158.53 |
| Taxes—Payroll and Personal Property | 1,382.68 | | 1,382.68 |
| Traveling Expense—Executive Secretary | 1,867.53 | | 1,867.53 |
| Traveling Expense—Field Secretary | 2,804.31 | | 2,804.31 |
| Traveling Expense—Executive Assistant | 697.52 | | 697.52 |
| Committees and Meeting Expenses (Exhibit C) | 47,764.29 | | 47,764.29 |
| Equipment Purchases and Repairs in Lieu of Depreciation | 600.05 | | 600.05 |
| General Expense | 154.49 | | 154.49 |
| Custodian Fees—Investments | 279.10 | | 279.10 |
| Student Awards | 225.00 | | 225.00 |
| Missouri State Medical Foundation Contribution | 25,000.00 | | 25,000.00 |
| Total Expenses | $148,219.00 | $57,186.97 | $205,405.97 |
| Excess of Expenses Over Income | $ 27,500.64 | $ 5,820.15 | $ 33.320.79 |

Exhibit C-1

## Missouri State Medical Association
## Statement of Investments, December 31, 1961

| Description | Bonds Par Value | Cost |
|---|---|---|
| U. S. Treasury 2½% Bonds 6/15/67-62 | $15,000 | $ 14,806.24 |
| U. S. Treasury 2½% Bonds 12/15/68-63 | 10,000 | 9,866.03 |
| U. S. Treasury 2½% Bonds 6/16/69-64 | 10,000 | 9,804.67 |
| U. S. Treasury 2½% Bonds 3/15/70-65 | 10,000 | 9,744.28 |
| U. S. Treasury 2½% Bonds 3/15/71-66 | 6,000 | 5,397.74 |
| U. S. Treasury 3 % Bonds 2/15/64 | 5,000 | 4,863.66 |
| U. S. Treasury 3⅝% Bonds 11/15/67 | 10,000 | 10,000.00 |
| U. S. Treasury 3⅞% Bonds 5/15/68 | 10,000 | 9,944.20 |
| U. S. Treasury 4 % Bonds 10/1/69 | 25,000 | 25,035.41 |
| Pacific Gas and Electric 4½% Bonds 6/1/90 | 5,000 | 5,000.00 |
| Central and Southwest Corp. 200 Shares | | 6,345.62 |
| Johns-Manville Corp. 100 Shares | | 5,582.34 |
| Morgan Guaranty Trust Co. of N. Y. 50 Shares | | 5,106.55 |
| Standard Oil Company of Calif. 91 Shares | | 5,059.00 |
| Union Carbide Corp. 37 Shares | | 4,935.37 |
| Total Cost | | $131,491.11 |

Exhibit C-2

## Missouri State Medical Association
## Statement of Committee and Meeting Expenses
## For the Year 1961

| | | |
|---|---|---|
| Annual Session | | $10,557.81 |
| Council Meetings and Councilors' Expenses | | 6,593.59 |
| Delegates to A.M.A. | | 3,883.09 |
| Public Relations | | 9,640.12 |
| Public Service | | 11,199.65 |
| Women's Auxiliary | | 1,852.52 |
| Committees: | | |
| Aging | $ 838.57 | |
| A.M.E.F. | 61.42 | |
| Civil Defense | 584.82 | |
| Councilor District | 133.74 | |
| Eye Health | 25.44 | |
| Health and Public Instruction | 1,174.23 | |
| Infant Care | 169.07 | |
| Laboratory Medicine | 145.99 | |
| Maternal Welfare | 36.64 | |
| Medical Economics | 140.56 | |
| Medical Education and Hospitals | 17.04 | |
| Mental Health | 144.88 | |
| Rural Medical Service | 199.28 | |
| Scientific and Postgraduate Work | 292.76 | |
| Tuberculosis | 73.07 | |
| Total | | 4,037.51 |
| | | $47,764.29 |

Exhibit D

## Missouri State Medical Association
## Dues Receivable and Membership by Societies
## December 31, 1961

| | MEMBERSHIP | | | | |
|---|---|---|---|---|---|
| Societies | Active | Honor | Junior | Total | Unpaid Dues |
| Andrew | 4 | 1 | | 5 | |
| Audrain | 17 | 1 | | 18 | |
| Barton-Dade | 8 | | | 8 | |
| Benton | | 1 | | 1 | |
| Boone | 82 | 3 | 15 | 100 | $ 35.00 |
| Buchanan | 69 | 13 | 4 | 86 | |
| Butler-Wayne-Ripley | 35 | 1 | 5 | 41 | 35.00 |
| Callaway | 14 | 5 | 2 | 21 | |
| Cape Girardeau | 39 | 5 | 4 | 48 | |
| Carter-Shannon | 1 | | | 1 | |
| Chariton-Macon-Monroe-Randolph | 22 | 4 | 2 | 28 | |
| Clay | 48 | 3 | 5 | 56 | |
| Clinton | 5 | | | 5 | |
| Cole | 38 | 4 | 3 | 45 | |
| Cooper | 10 | 1 | 2 | 13 | |
| Dallas-Hickory-Polk | 7 | 1 | | 8 | |
| Dunklin | 14 | 4 | 5 | 23 | 17.50 |
| Franklin-Gasconade-Warren | 26 | | | 26 | |
| Grand River | 39 | 5 | 4 | 48 | |
| Greene | 140 | 12 | 11 | 163 | |
| Henry | 9 | 1 | 1 | 11 | |
| Howard | 6 | | | 6 | |
| Jackson | 611 | 119 | 48 | 778 | 87.50 |
| Jasper | 55 | 6 | | 61 | 35.00 |
| Jefferson | 15 | 1 | 2 | 18 | |
| Johnson | 9 | 1 | 3 | 13 | 17.50 |
| Lafayette-Ray | 20 | | 4 | 24 | |
| Lewis-Clark-Scotland | 2 | 1 | | 3 | |
| Lincoln-St. Charles | 20 | 1 | 2 | 23 | |
| Marion-Ralls-Shelby | 22 | 5 | 5 | 32 | |
| Mid-Missouri | 31 | | 3 | 34 | 70.00 |
| Miller | 2 | | | 2 | |
| Mineral Area | 24 | 3 | 2 | 29 | |
| Moniteau | 4 | | | 4 | |
| Montgomery | 3 | 1 | | 4 | |
| Morgan | 4 | | | 4 | |
| Nodaway-Holt-Atchison-Gentry-Worth | 16 | 2 | | 18 | |
| North Central | 11 | 4 | | 15 | |
| Ozarks | 45 | 6 | 2 | 53 | 175.00 |
| Pemiscot | 15 | 3 | 2 | 20 | 35.00 |
| Perry | 9 | 1 | | 10 | |
| Pettis | 24 | 7 | | 31 | |
| Pike | 4 | 3 | 3 | 10 | |
| Platte | 5 | | | 5 | |
| St. Louis City | 1,001 | 115 | 168 | 1,284 | 1,003.75 |
| St. Louis County | 384 | 42 | 26 | 452 | 157.50 |
| Saline | 16 | 3 | 2 | 21 | |
| Semo | 29 | 5 | 2 | 36 | 70.00 |
| South Central | 20 | 2 | 2 | 24 | 52.50 |
| Webster | 2 | 1 | 1 | 4 | |
| West Central | 29 | 10 | 3 | 42 | |
| Totals | 3,065 | 407 | 343 | 3,815 | $1,791.25<br>(A) |

(A) Delinquent dues of members at December 31, 1961 carried at the request of local societies.

## Curiosa et Trivia

WILLIAM B. McCUNNIFF

Although held blameless by the courts since their manufacturing processes were prescribed by Federal regulation, Cutter Laboratories has paid over three million dollars in damages resulting from their Salk vaccine produced in 1956.

---

Letter to the Editor, *British Medical Journal:* "The word malignancy means the quality of being malignant. . . . It is sad to see an English journal permitting this American barbarism. . . ." The defect of this "American Barbarism" has been pointed out in this column, to wit: "Malignancy is an adverb, meaning the quality of being malignant."

---

Fourteen persons per thousand population in the U. S. suffer from peptic ulcer; each one restricts his activity almost 20 days a year because of ulcer symptoms.

---

Currently there are as many isotope administrations in the U. S. as there are appendectomies —almost half a million a year.

## Capsule Clinics

- Patients anesthetized with various agents developed hypertension and tachycardia following injection of succinyldicholine. This effect probably results from sympathetic stimulation, suggesting that succinyldicholine stimulates both the parasympathetic and sympathetic nervous systems. Williams, C. H., et al., Anesthesiol. 22:947, 1961.

- Despite the clinical impression that neutralization of acid is helpful in management of duodenal ulcers, pH changes induced by antacids are small and fleeting. Rovelstad, R., and Maher, F. T., J. Lab. & Clin. Med. 58:945, 1961.

- The perfect result with x-ray in treatment of plantar warts located on pressure points is often followed by a scar far more troublesome and painful than the original lesion. Pillsbury, D. M., Postgrad. Med. 30:180, 1961.

---

From Clinical Clippings, the Francis Roberts Agency, Inc.

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# WASHINGTON

### Kennedy's Special Health Message to Congress

The "passage of time has increased the urgency for financing health care for the aged financed by social security," the President told Congress in a special health message early in March. Congressmen were told that "our social insurance system today guards against nearly every major financial setback: retirement, death, disability and unemployment. But it does not protect our older citizens against the hardships of prolonged and expensive illness. . . . Our older citizens go to the hospital more often—they have more days of illness—and their stays in hospitals are thus more costly." The President indicated that private health insurance has made notable advances in recent years but that older people, who need it most but can afford it least, are still unable to pay the necessary high premiums for adequate protection as evidenced by the fact that less than 50 per cent of our aged population has any kind of health insurance—and most of these have insufficient coverage. He criticized Kerr-Mills legislation as inadequate and unpalatable as it embodied a "means test" and reached "very few of those who are not eligible for public assistance but are still not able to afford the care they need."

### AMA President Larson Fires Back

President Larson informed the people that the Kennedy program is not health insurance—"it is political medicine." The real issue is not medical care versus no medical care for the elderly—the real issue is: should workers and employers be forced to pay substantially increased taxes to provide medical care for millions financially able to take care of themselves. Dr. Larson reiterated physicians' support of Kerr-Mills for those who need help and health insurance and prepayment plans for the non-needy aged.

### More Political Medicine

Although less publicized, in addition to medical care for the aged, the President urged in his Health Message (1) a 10-year program of grants to plan and construct schools of medicine, dentistry and public health, (2) a program of federal scholarships for students coupled with cost-of-education payments to schools, (3) a three-year program of federal assistance to get American children immunized against polio, diphtheria, whooping cough and tetanus . . . the government paying the costs of vaccines for all children under 5 provided that state and local communities set up inoculation programs, (4) legislation authorizing 5-year federal loans to help set up group practice medical and dental clinics, (5) stepped up health research including a new Institute for Child Health and Human Development and authorization for contracts and cooperative arrangements for research related to Maternal and Child Health and Crippled Children Services, (6) more funds for the National Institute of Mental Health to increase its program for the training of professional mental health workers and physicians, (7) a program of federal research and grants to help combat the growing problems of air pollution, (8) establishment of a National Environmental Health Center for research and training in air and water pollution and radiation hazards coupled with increased appropriations in these fields, (9) legislation to encourage states to provide facilities and services for migrant workers (bill has already passed the Senate), (10) adoption of a reorganization plan for the U. S. Public Health Service according to a plan to be sent to Congress later.

### Medical Scholarships in Trouble

The House Commerce Committee has rejected the President's plan to give federal scholarships to medical and dental students by a voice vote. The Committee was to consider a substitute plan under which qualified students would be given federal loans rather than scholarships. The Committee has tentatively decided to expand the construction part of the program to give federal construction grants to schools of optometry, nursing, pharmacy and podiatry. Administration plan would have restricted such aid to schools of medicine, dentistry and public health.

### Polls, Polls and More Polls

Out of 20 polls conducted by GOP Congressmen among their constituents, 14 turned up strong opposition to the President's proposal for health care for the aged, while six showed more support than opposition. Five polls by House Democrats of voters in their districts showed majority support in four and overwhelming opposition in the fifth.

# New from Saunders

## 1 Reid — Textbook of Obstetrics

*A New Book!—Offers keen insight into the biologic aspects of birth*

**A fresh approach to obstetrics emphasizing biologic rather than mechanistic aspects.** This valuable new book combines basic fundamentals of obstetrics with sound principles of patient management. It will help you solve many maternity problems—from early diagnosis of pregnancy to safe delivery. Look for features such as these: Detailed instructions on managing complications—Emphasis on fetal welfare as well as maternal safety—Help on understanding psychological problems of the expectant mother—Superb illustrations of normal and abnormal conditions, techniques, instruments, etc. Topics include: *Medical and surgical diseases of pregnancy—Assessment of maternal and perinatal mortality—Shock, coagulation defects and acute renal failure—Physiology and mechanisms of labor in parent types of pelves—etc.*

By DUNCAN E. REID, M.D., William Lambert Richardson Professor of Obstetrics and Head of the Department of Obstetrics and Gynecology, Harvard University Medical School; Chief-of-Staff, Boston Lying-In Hospital. Illustrated by EDITH TAGRIN. 1087 pages, 7″x10″, with 442 illustrations. About $20.00. *New—Just Ready!*

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Completely rewritten for this edition, the text includes such new topics as: *taking a neuropsychiatric history—Physical diagnosis of the child, including normal variations in heart sounds—Examination of the pharynx, the larynx and cheeks—Diagnosis of peripheral vascular disease.* Extensive revisions are reflected in sections on: diseases of the eye; auscultation of the heart; coronary insufficiency; acute myocardial infarction.

By RALPH H. MAJOR, M.D., Professor of Medicine and of the History of Medicine; and MAHLON H. DELP, M.D., Professor of Medicine, The University of Kansas. 355 pages, 6½″x10″, with 527 illustrations. About $7.00. *New (6th) Edition—Just Ready!*

## 3 Adler — Textbook of Ophthalmology

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By FRANCIS HEED ADLER, M.D., Emeritus Professor of Ophthalmology, University of Pennsylvania Medical School; Consulting Surgeon, Wills Eye, Philadelphia General, and Children's Hospitals of Philadelphia. About 565 pages, 6″x9¼″, with 288 illustrations, 26 in color. About $9.50. *New (7th) Edition—Just Ready!*

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Across
Missouri

### Others Have Problems Too

At a legislative conference at the American Medical Association earlier this year in Chicago, Dr. Durward G. Hall, Springfield, Missouri Congressman, was one of the speakers and read a letter which he had received. He presented it with permission of the author and the letter is presented here with permission of the author.

"Dear Dr. Hall: I understand that Freeman and Kennedy contemplate the complete control of the dairy industry. The deal as explained in the Springfield paper would practically ruin me and others around here for we milk in the spring and summer off of grass. A monthly quota system would simply mean to give the most of it away. Cows milk after they freshen and if they are geared to calve in the spring it is time and production consuming to change them to suit the whims and fancies of politicians. Tell the boys they milk much cheaper from grass than even government grain. I milk cows, raise hogs, beef, corn, hay. If my farm is state controlled and I don't have the freedom to run it as I choose, do I really own it? If I don't own it what is the difference between this and Russia?

"Now I realize that to simply be against something is not enough. We must find some constructive answers to the dairy problem, if there is a problem. Perhaps something that could be seen about in Washington would be the finding of some other medium besides milk to test the amount of fallout. This has hurt milk sales no doubt. Then about the world trade deal—I don't understand that Dr. Hall and I don't think anyone else around here does. Perhaps you should enlighten us as well as Mr. Kennedy is going to do. Congratulations on that deal of the A.M.A. and Blue Shield to insure the elderly. Too bad it couldn't have come before the medical care for the aged bill forced it. Makes bad politicking, don't it?

"I've got three boys, 7, 5 and 1—sure would hate to see politics and schooling get mixed up together. We don't need any federal aid in Jenkins.

"I've said enough, just wanted you to know that we the people are still interested in our country and are behind you 100 per cent, still realizing that you're only one in 435 or whatever the number is. In case you're planning on running this fall, anything I can do to help you in the campaign will be gladly done."

### More Statistics on Number of Aged

It is no new figure that Missouri ranks second only to Iowa in the percentage of population more than 65 years of age. However a recent report by the Population Reference Bureau gives some figures not quite so generally known.

The report states that in 1900 the 65-and-over group made up only 4 per cent of the population while in 1960 the percentage was more than 9 per cent, with 15 per cent of the voting-age population.

The 1960 census figures showed 16,600,000 of a population of 179,300,000 were in the 65-and-over bracket, an increase of 34.7 per cent in the last 10 years compared to a population growth of 18.5 per cent.

New England and the Great Plains states have the heaviest concentrations of elderly inhabitants with the mountain and Southern states the lowest. Florida was the only state outside the Midwest and New England with a percentage more than 11, and it was 11.2. California had a percentage of 8.8. For comparison, the percentages of the Midwest states are Iowa 11.9, Missouri 11.7, Nebraska 11.6.

Nonwhite citizens make up 11 per cent of the total population but only 8 per cent of the elderly.

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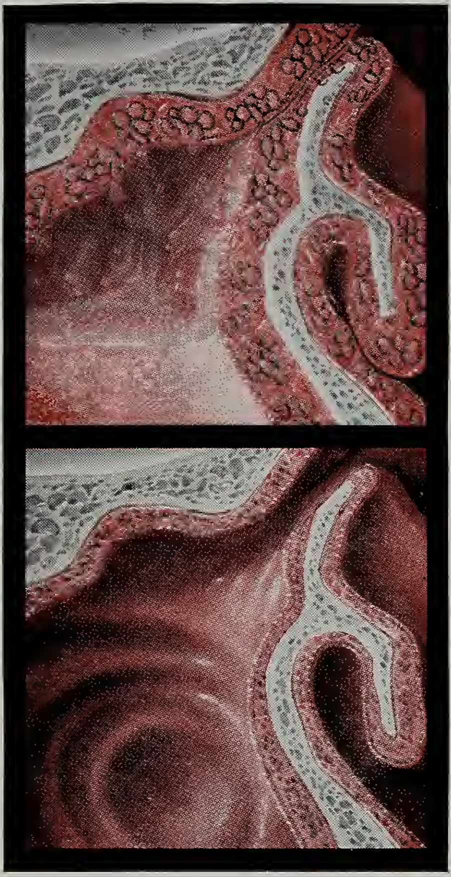

**The clogged sinus**
In sinusitis, the mucous membrane becomes hyperemic and edematous, lymph glands and goblet cells hyperactive. Ostium is closed by edema and secretions cannot drain freely.

**The normal sinus**
Magnified anatomy of a portion of maxillary sinus showing mucous membrane with cilia and lymph glands. Ostium is normal and patent.

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Delicate respiratory tissue and its natural defenses are not harmed by exceptionally bland Neo-Synephrine; systemic effects are nil; it does not sting. For years it has been recommended for prevention and treatment of sinusitis.[1-3] Repeated applications do not lessen effectiveness.

Available in plastic nasal sprays for adults (½%) and children (¼%), in dropper bottles of ⅛, ¼ or 1 per cent.

1. Grant, L. E.: Coryza and nasal sinus infections, Clin. Med. & Surg. 42:121, March, 1935. 2. Putney, F. J.: Sinus infection, in Conn, H. F. (Ed.): Current Therapy 1952, Philadelphia, W. B. Saunders Company, 1952, p. 110. 3. Simonton, K. M.: Current treatment of sinusitis, Journal-Lancet 79:535, Dec., 1959.

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**C. G. STAUFFACHER, M.D., Secretary**

# Missouri Academy of General Practice

Things are moving along on good schedule for the fourteenth Annual Scientific Assembly of the Missouri Academy, Saturday and Sunday, November 3-4, 1962, at the Chase Hotel in St. Louis. The scientific program is more than half completed and approximately one half of the 57 exhibit booth spaces have been reserved. The speaker for the President's Installation Banquet on Saturday night, November 3, will be Mr. Mac F. Cahal, Executive Director and General Counsel of our American Academy of General Practice. Mac will speak on the intriguing subject, "Let the Public Behold You."

April 9-12, 1962 finds the AAGP holding its 14th Annual Scientific Assembly in Las Vegas, Nevada. A look at the program truly bears out the statement, "Las Vegas Assembly Offers AAGP Members a Medical Smorgasbord." In addition, think of all the fun awaiting at this celebrated spot. The Congress of Delegates opens business deliberations at 10:00 a.m., Saturday, April 7, in the Flamingo Hotel Ballroom.

The scientific program will open Monday afternoon (April 9) at 1:00 p.m. in the Convention Hall Auditorium with the final session drawing to a close at 12:00 noon, Thursday, April 12.

There are many ways of getting to Las Vegas and an awful lot to do there, so shall we see you?

The Missouri Academy of General Practice Delegates, Dr. Charles Metz, St. Louis, and Dr. Roy Pearse Jr., Nevada, will introduce a resolution on behalf of the St. Louis Academy and the Missouri Academy in the AAGP Congress of Delegates extending an invitation for the AAGP to meet in St. Louis, Mo., in 1964 or 1965 or any subsequent year. We want them to know we would like them to meet again in the headquarters state.

---

## MISSOURI'S DEANS OF MEDICAL SCHOOLS RECEIVE AMA-ERF FUNDS

Dr. Wilson, Dr. Broun and Dr. Chaplin Jr. receive checks from the Missouri chairman of AMA-ERF, Dr. Murphy.

Checks totaling almost $32,000 were given to Missouri's three medical schools on February 28 by the American Medical Association Education and Research Foundation.

The grants were presented to the deans of the individual schools by James P. Murphy, M.D., of St. Louis, at a luncheon at the University Club. Dr. Murphy is the chairman of the Missouri State Medical Association Committee for the Foundation.

Vernon E. Wilson, M.D., dean of the University of Missouri School of Medicine, received $6,996; Goronwy O. Broun, M.D., dean of St. Louis University School of Medicine, received $12,051, and Hugh Chaplin Jr., M.D., associate dean of the School of Medicine at Washington University, representing Dean Edward Dempsey, received $512,686.

The money is part of $1,303,161.10 contributed by the nation's doctors during 1961 to the country's medical schools through the Foundation. Of the total amount, $202,219.27 was raised through the efforts of the Woman's Auxiliary to AMA. The total is the largest amount contributed to the Foundation in a single year.

Deans of individual medical schools may use the money at their discretion for special projects or expenses outside their budgets.

The AMA established the program in 1951 so physicians could play a greater part in financial support of the nation's medical schools. Money contributed to AMA-ERF may be designated for a specific medical school. All money not designated is divided equally among the 86 schools.

Physicians have given more than eleven and

*(Continued on page 385)*

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# Woman's Auxiliary

Each time a new beginning is made it creates within us a surge of hope and enthusiasm, a sense of challenge for what lies ahead, a deep thankfulness to those in whose footsteps we walk for their wise guidance and counsel.

Mrs. J. Martyn Schattyn

Jane Wade has been a beacon for us to follow this year. Her sincerity and depth of conviction, her ability to be articulate in difficult circumstances and her devotion and loyalty to the Auxiliary as a real force to be reckoned with in our communities—all these set her apart as an outstanding president of whom Missouri can be justly proud.

Now it becomes my privilege to take up her gavel and to carry on. As an apprentice, with Jane as my tutor, I have endeavored to acquaint myself more thoroughly with the many facets of state work. The thrill of serving as a national delegate last June, the pleasure and delights experienced at Arrowhead Lodge in September at our Fall Board Conference, the October National Conference of presidents and presidents-elect held in Chicago—all these great occasions served but to impress upon me the influential and outstanding organization the Woman's Auxiliary really is.

Then, to crown my year, I had the greatest joy which can come to a state officer, that of installing the new officers of the reactivated Butler-Wayne-Ripley Medical Auxiliary in Poplar Bluff. In November, Mrs. John O'Connell, one of our past state presidents, Mrs. James Fairchild, Director of the 10th District, and I were guests of the Medical Society at dinner at their lovely country club, after which we met with the wives and talked Auxiliary. We hope that the friendships formed and the decisions made on this night will mark a milestone in the affairs of Butler-Wayne-Ripley counties.

Working with me this year is a remarkable slate of officers and committee chairmen, each one capable and efficient, ready to put some original ideas to work in her particular field. Our national organization is our primary guiding light, ready at all times to give us assistance. But the shining star of every Auxiliary performance is the individual doctor's wife. She may offer her home for a meeting, she may help prepare the food, she may be the Chairman of the Day or just on the telephone committee. Her task might be to secure a speaker, address envelopes or round up volunteers to work on a community project. If she likes to write, reporting for medical bulletins or newspapers may be her penchant.

Singly, none of these things may accomplish much, but coordinated in a group of enthusiastic D. W.'s the telephone, the pen, the spoken word can become powerful tools for the good of the medical profession. Each of you holds this power in the palm of your hand, and using it for the good of all humanity is your greatest privilege.

Ahead of us, in the field of legislation, lies a real fight. The King-Anderson Bill is being pushed by the administration. If the planners cannot get it in by the front door, they may try to sneak it in by the back. Any way, however devious, will suit the purposes of this type of fuzzy, foot-in-the-door thinking. As a leading opponent of old age medical care through social security, the medical profession is pointed to as showing only self-interest. But, as the Richmond, Virginia, *Times-Dispatch* says editorially, ". . . the dispute is one directly affecting the medical profession, and the A.M.A. could hardly be expected to sit quietly by without protesting when it believes—as we do—that the plan could be an entering wedge to socialized medicine."

No figures exist even today on the actual needs of our elderly citizens, or of the long range cost of such a program as proposed in the King-Anderson Bill. How then can Congress act intelligently? The *Chicago Sun-Times* calls the administration's election year emphasis on this bill ". . . indeed a shabby and cynical approach to a matter involving principles of human dignity and the fortunes of the helpless in times of personal emergency."

Even our emphasis on the field of Health Careers can be affected by the legislative developments of the next session of Congress. How can you tell eager young people to look forward to a rewarding and challenging career if they, too, may soon be under government control?

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# Ontogenetic Nutrition

## *Symposium*

This symposium is furnished by the University of Missouri School of Medicine as a special University issue of Missouri Medicine.

The conference was presented at the University of Missouri School of Medicine on April 5, 1961. It was presented by the Departments of Biochemistry and Pediatrics and the Division of Extension of the University in cooperation with the National Vitamin Foundation.

The purpose of the symposium was to present a concept of the changing nutritional requirements and to elucidate the nutritional problems of the individual as he progresses from conception, through growth, maturation and reproduction, into old age.

# Introduction

**ROBERT S. GOODHART, M.D.,** *New York*

**Dr. Goodhart is Scientific Director, The National Vitamin Foundation.**

The foundation is pleased to be a co-sponsor with the University of Missouri School of Medicine, of this conference on ontogenetic nutrition so ably planned and arranged by Drs. T. D. Luckey and R. L. Jackson. I am most grateful to them for the opportunity given me to be a participant.

Dr. Luckey has informed me that today's conference is only part of a program of education in nutrition included in the curriculum for medical students at the University of Missouri. This is good news. Generally in this country, neither the undergraduate nor postgraduate education of physicians places nearly as much emphasis on the subject of nutrition as the importance of this matter to health justifies. Recognition of this fact caused The National Vitamin Foundation, in 1958, to institute a nutrition education program for practicing physicians. The program, which provides knowledgeable and competent speakers on medical nutrition, on request, to recognized medical groups throughout the country, has found wide and ready acceptance. It seems obvious that the physician will accept and is anxious to receive information on nutrition, if the subject is presented to him in a medical context.

Recently the program has been expanded to include lectures and conferences for medical students and hospital house and attending staffs. Participation in today's conference is a manifestation of this change in policy. I must say that I am delighted at the large attendance of students, faculty, practicing physicians, nutritionists, dietitians and nurses.

Let me interject here, and I am sure I speak

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**ROBERT W. HILLMAN, M.D.,** ***New York***

# Fetal Nutrition: Nutrition in Pregnancy

THE IMPORTANCE of nutrition to the outcome of pregnancy is redundant in the development of the fertilized ovum into a viable neonatus of four kilos during a span of 40 weeks. However—and not withstanding the biologic and emotional appeal of Toverud's axiom that "the child is nutritionally nine months old at birth"—the considerable body of information relating to maternal and fetal nutriture remains as yet too controversial and too contradictory to permit ready clinical application.

The several reasons for this difficulty include both those generic to all nutritional problems and some that are unique to the gravid state:

1. The ethical, legal and moral limitations of investigating the human subject are here compounded by the need to consider the interests of the child (and the father) as well as the mother.
2. Animal studies, characterized by species and strain differences, cannot readily be extrapolated to human experience.
3. Intra as well as inter-individual variations preclude simple and valid conclusions from limited observations. Since not only the mother, but also the fetus and placenta must be regarded as distinct biologic entities, the number of possible nutritional combinations is all but infinite.
4. The interdependence and interaction of at least half a hundred aliments and nutrients precludes identification of the precise rolls of these separate components of the diet.
5. Factors such as parental age, birth rank and birth interval influence the outcome of pregnancy.
6. The mother's preconception diet (and possibly that of her mother) is important. Todd correctly contended that "adult woman is the outcome of growth, enhanced, warped, dwarfed and mutilated by the adventures of life."
7. The ability of the human organism—and, most certainly, of others—to adapt to suboptimal intakes (sometimes with impaired capacity to utilize desirable increments) of dietary essentials compounds the difficulties of establishing optimum quantities of these substances.
8. Assessment of the outcome of gestation is obviously a function of the criteria adopted. A wide range of indexes—maternal and fetal, early developing and late appearing—represent not only a convenient battery of parameters for evaluating reproductive experience, but also an equal number of opportunities for inconsistent and even incompatible interpretations. Nutrition considered optimum in respect to one aspect of reproduction is not necessarily optimum in respect to another and, moreover, is not necessarily optimum in respect to non-reproductive facets of individual health and survival.

**Dr. Hillman is Professor of Environmental Medicine and Community Health, State University College of Medicine, New York City.**

Notwithstanding these limitations and with due consideration for the bias inherent in predominantly positive reports, impressions concerning the generally favorable influence of good nutrition on the outcome of pregnancy probably are valid. Specific parameters apparently influenced by parental nutriture include: toxemia and other maternal complications; length of labor; newborn weight (notably of the liver), length and chest circumference; the occurrence of prematurity, stillbirth, abortion, sterility; and even the intelligence of the offspring.

The present considerable support for the relationship of maternal nutrition on ante-, peri- and postnatal events derives as much from observations on lower species as on man. Livestock breeding in particular has provided abundant opportunities for modifying pregnancy as well as lactation through alterations in diet. Studies of mammalian reproduction (e.g. sheep, seals) under so-called natural conditions have also provided valuable information concerning the roles of major aliments and of trace elements such as calcium, phosphorous, copper and cobalt.[1] Laboratory animal studies, although possibly less applicable to human experience, have identified undoubted generic needs in reproduction for protein factors and specific nutrients. The experimental production of congenital malformations, notably by Warkany,[2] has emphasized the importance of timing, dosage and duration in the manipulation of essential nutrients. An excess as well as a deficiency of a required substance evidently conduces to a variety of deleterious effects, ranging from neonatal death, through successively earlier gestational adversities, to actual failure of conception. The complex pathogenesis of these abnormal events is suggested by similarity to genic effects as well as to those induced by a variety of physical and chemical agents—conceivably through final, common metabolic pathways in critically sensitive, differentiating tissues.

Evidence for the role of nutrition in human pregnancy derives from three general categories of observations: (1) records of large population groups (vital statistics) under varying socioeconomic, including nutritional, conditions (e.g. in the United Kingdom during World War II); (2) observations on selected (categorical) hospital and clinic groups, and (3) controlled studies on patients receiving prescribed diets and/or nutritional supplements. Much of this material has been reviewed by Garry and Wood,[3] Stuart and Burke,[4] Josey,[5] Stearns,[6] and by Hepner.[7] Although reports largely affirm the favorable influence of good maternal nutriture, negative and/or equivocal impressions have frequently been registered. In these instances other conditions affecting perinatal morbidity may have been operative to a degree that claims for the specific role of nutrition (as but one among many variables) would not always be substantiated.

Current thinking on antenatal—and prematernal—nutrition commonly reflects the extensive, not readily reconciled observations of two groups of investigators. Tompkins, Wiehl and their associates,[8] at the Lying-In-Hospital in Philadelphia, have presented impressive evidence for the relation of maternal nutriture to infant birth weight and to the occurrence of both toxemia and prematurity. Underweight as well as overweight patients were more disposed to adverse perinatal experience, with nutritional supplements appearing to exert some protective action. Darby, McGanity and their colleagues at Vanderbilt[9] have not wholly corroborated these findings. Significantly, their observations indicated no advantages to dietary intakes in excess of recommended allowances or to vitamin supplementation—results possibly attributable to the good, overall nutriture of their patients on entering pregnancy. The Vanderbilt group also emphasized the wide variation in both laboratory and clinical parameters of uncomplicated pregnancy. Although they concluded that their "data failed to indict nutrition as a major causation in the development of commonly encountered obstetric and fetal abnormalities," they also stated that they "did not wish to be interpreted as concluding that nutrition is unimportant in pregnancy. There is no question that pregnancy can be influenced by nutritional deficiencies and that the health of the offspring can suffer from maternal malnutrition."

Similar confusion prevails in respect to the so-called physiologic anemia of pregnancy (Holly[10]) which, in this country, is predominantly of the iron deficiency type. There is considerable evidence to suggest that the routine administration of iron during pregnancy can prevent or mitigate a fall in hemoglobin level,[11, 12, 13] but the merits of this procedure have been questioned by others[14, 15] who are actually concerned about possible contraindications. The roles of

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## INTRODUCTION

*(Continued from page 311)*

for Dr. Luckey and Dr. Jackson as well as myself, that our efforts are directed to stimulating the physician's interest in and knowledge of nutrition, and are not in any way designed to deprecate the role of the nonmedical nutritionist. Research in and the teaching and practice of nutrition require the cooperation of a number of disciplines. The physician has not been pulling his weight. We welcome all of you and hope that none will hesitate to question or to comment.

Of course, the University of Missouri and The National Vitamin Foundation are not the only ones to see the need for more and better education of physicians in nutrition. The American Society for Clinical Nutrition was created not only to improve the amount and quality of research in clinical nutrition, but also to stimulate both the undergraduate and graduate nutrition education of physicians. The society is young. It held its first scientific session in the spring of 1960. But it has a strong roster and a good journal, *The American Journal of Clinical Nutrition*, and much is expected of it. Also the Council on Foods and Nutrition of the A.M.A. has instituted a study of nutrition education in American medical schools.

Thus there appears to be good reason to anticipate an increasing emphasis on nutrition in the education of American physicians. The University of Missouri School of Medicine can be proud of the initiative it has taken in this respect.

other hematinic substances require further clarification, notably in respect to the macrocytic anemias, which, although more prevalent in other areas, are not rare in the western world. However, evidence is accumulating that, even in clinically uncomplicated pregnancies, there are alterations in the overall metabolism of vitamin $B_6$,[16] of vitamin $B_{12}$[17] and of folic acid.[18]

Recent observations[19, 20] have underscored the limitations of body weight, per se, as an index of nutritional status during pregnancy. McCartney et al.[21] and Plentl and Gray[22] have indicated that toxemia is associated with an excess of exchangeable sodium in the fat free tissue components. Macy and her coworkers[23] have provided a much needed physiologic frame of reference through a mass of observations on prenatal subjects. Appropriately, Stearns[6] and also Soichet[24] have emphasized the effects of emotional stress on maternal metabolism.

A major obstacle to understanding the nutritional requirements during pregnancy is related to the difficulty of defining, identifying and evaluating nutritional—as distinct from non nutritional—factors. The need to consider the influence of the prematernal nutriture on perinatal events[25] underscores the practical importance of satisfactory dietary practices long before conception—probably from the mother's own early growth and development.

Implicit in the effective nutritional management of pregnancy is the need to individualize each patient, including appropriate concern for the psychologic factors that, directly and indirectly, affect maternal, and presumably fetal, metabolism. (The contented cow is a biologic as well as a commercial characterization.) The National Research Council's recommended daily caloric intake (1958) may be excessive for the average, energy-spared American woman, in whom rigid adherence may lead to overnutrition. However, the recommendations for protein and essential micronutrients should provide a desired margin of safety for all but the patient with inordinate demands. The minimum energy vehicle required for vitamin and mineral needs has been estimated at 2,000 calories daily, although, in the temporary absence of concern for saturated fats, precise prescriptions emphasizing skimmed milk and organ meat products, may permit satisfaction of these requirements with as few as 1,200 calories. Regular exercise not only improves overall metabolic function, but, through greater caloric flexibility, permits a more acceptable variety of protective foods.

Specifically, the diet should provide sufficient calories to maintain the calculated ideal body weight, with an additional 300 to 400 calories during the last five months of gestation (1,000 added during lactation). The protein component of approximately 1½ grams per kilo of ideal weight should include 60 to 70 per cent from animal sources; 80 grams is a satisfactory average, with an increase to 100 grams during lactation. Fat should contribute some 30 per cent of the total calories, assuming satisfactory tolerance. The carbohydrate balance is preferably provided as starch and other complex polysaccharides in the interest of even blood sugar levels and adequate roughage. However, sources of readily available dextrose may be indicated for the patient with a tendency to hyperemesis. Individual meals should be balanced, with all essential components represented in each, even where small, frequent feedings may be advised for such conditions as excessive nausea in the first trimester and abdominal fullness near term.

The best index of nutrition needs is the condition of the patient. Since many diets are predicated on the unfounded premise of satisfactory status prior to conception, "therapeutic trial" often represents the only practical guide to diet prescription. In the normal-weight individual, a total gain of 18 to 22 pounds thoughout gestation may be considered optimal. It also represents an acceptable objective above the ideal level for the initially substandard patient. Drastic weight reduction of the overweight gravida seems contraindicated, although a smaller than average gain has reported advantages for such individuals and appears compatible with a satisfactory course. Weight control, obviously, should never be achieved at the expense of dietary essentials.

Weight gain should be regular and even, avoiding both the inadequate, early increment associated with prematurity and the later, excessive gain associated with toxemia. A total increase of about 3 pounds over the first four months (1.5 pounds in the first 10 weeks), with a subsequent average gain of 0.8 pounds per week seems an acceptable goal. However, the limitations and nonspecificity of the single parameter, body weight, must be emphasized. Many clinicians advocate routine restriction of sodium during pregnancy, although one recent report[26] provided provocative support for a high salt intake. Until its metabolic role is better understood, and in the absence of specific contraindications, consumption of 2.5 to 5.0 grams of salt (conceivably more in the summer months) should probably be permitted in the interest of a practical, overall adequate dietary regimen.

Multivitamin supplements (one-half to three times the NRC recommendations) seem warranted to provide an extra margin of safety during pregnancy and lactation. Although supplementation probably is not necessary in all—or even in most—instances in which a good diet is assured, it is impossible at present to identify patients and/or conditions representing unusual requirements. Moreover, the crucial and irretrievable first 40 weeks of a new individual's existence permit neither deliberation nor experimentation.

Iron supplements seem indicated in most pregnant women, especially those with a history of anemia, multiple births, frequent pregnancies or a hemoglobin level below 12 grams per cent. Beyond the seeming advantages of a sustained, satisfactory hemoglobin concentration throughout pregnancy—notably in women whose metabolic systems are adjusted to a high normal range—this practice seems justified by the frequency and unpredictability of complicated delivery (e.g., cesarian section, intrapartum and postpartum hemorrhage). Oral preparations providing 100 to 110 mg. of elemental iron daily usually are adequate, especially during the third trimester, when it is most effectively absorbed. Intramuscular forms seem suited to instances of alimentary intolerance and of low hemoglobin levels close to term. Ascorbic acid and pyridoxine supplements may be indicated in some instances of refractory anemia, but more detailed evaluation should precede the prescription of folic acid, vitamin $B_{12}$ and other modalities directed at an apparent macrocytic anemia.

Although calcium salts may be beneficial in limited instances, notably in the management of leg cramps, supplementation seems unnecessary when the daily intake is 1.3 grams (2.0 grams during lactation) through usual food sources, notably milk products. Where indicated, the gluconate or lactate form seems preferable, in the absence of better information concerning the action of phosphate preparations. The possibility that large quantities of milk may interfere with iron absorption must always be considered, as must the maternal capacity for adaptation.[27]

Other mineral supplements are not ordinarily required, although an adequate iodine intake must be specified in categorical situations.

The patient should be encouraged to adopt a good nutrition program at the onset of pregnancy, to maintain it throughout lactation and, with suitable adjustments, to continue it during the intervals between pregnancies. She should also be motivated, at this time of special awareness, to encourage good dietary practices among members of her family—particularly the prospective mothers of another generation.

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HAROLD M. NITOWSKY, M.D., *Baltimore*

# Infant Nutrition: Premature And Normal Born

One is led to believe from occasional remarks in the pediatric literature that infant feeding is no longer a major problem. Great progress has been made but controversies and gaps in knowledge still exist. The purpose of this paper is to review some of these areas as well as some of the basic concepts in infant nutrition.

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Few deny that breast feeding is the feeding of choice for the newborn infant, be it for reasons of emotional gratification, cleanliness and simplicity or because of easily obtained nutritional benefits. However, during the last few decades a steady decline in the incidence and duration of breast feeding has occurred in this country and some type of substitute feeding is employed.[1, 2, 3] The basic explanation for this declining incidence is the simplicity, safety and apparent success of artificial feeding. Undoubtedly, other factors play a role such as the lack of real interest of hospital personnel in promoting breast feeding and the current practice of early discharge of mothers from the hospital before problems associated with nursing have been satisfactorily resolved.

Because of the teleologic consideration that human milk must be superior to cow's milk as the initial food for the human infant, questions have been raised whether infant nutrition can be considered truly optimal with some type of modified cow's milk feeding.[4] Before considering this problem it would be helpful to review some of the differences in composition between human and cow's milk.

## Composition of Human and Cow's Milk

Both have a similar content of water, solids and fat but they differ in protein, lactose and ash content (table 1). The quantitative differences in major milk components obviously change the energy distribution pattern so that only 7 to 8 per cent of the calories in human milk are provided by protein and 42 per cent by carbohydrate while in cow's milk 22 per cent of the total calories come from protein and 29 per cent from carbohydrate. The difference in total protein is largely due to a difference in casein content, cow's milk having been shown to contain at least three electrophoretic components and to differ chemically from the casein in human milk by having a significantly lower sialic acid and a higher phosphorus content.[6] A comparison of some of the ash components indicates that sodium, potassium and chloride concentrations are two to three fold greater in cow's milk than in human milk. In addition, cow's milk contains approximately four times the calcium and six times the phosphorus concentration of human milk.

TABLE 1

COMPOSITION OF MATURE HUMAN MILK AND COW'S MILK[5]

| *Content in 100 ml of Whole Milk* | *Human Milk* | *Cow's Milk* |
|---|---|---|
| Water (gm) | 87.6 | 87.2 |
| Energy (cal) | 71 | 69 |
| Total Solids (gm) | 12.4 | 12.8 |
| Ash | 0.21 | 0.71 |
| Fat | 3.8 | 3.8 |
| Lactose | 7.0 | 4.8 |
| Protein | 1.1 | 3.3 |
| Casein | 0.4 | 2.7 |
| Lactalbumin | 0.4 | 0.4 |
| Lactoglobulin | 0.2 | 0.2 |
| Major Ash Components | | |
| Chlorine (gm) | .043 | .100 |
| Potassium (gm) | .055 | .138 |
| Sodium (gm) | .015 | .058 |
| Calcium (gm) | .034 | .126 |
| Magnesium (gm) | .004 | .013 |
| Phosphorus (gm) | .016 | .099 |
| Iron (gm) | .00021 | .00015 |

Although the total fat content of both human and cow's milk is similar, there are qualitative differences in fatty acid distribution (table 2). The concentration of linoleic acid, the only fatty acid known to be essential for the infant, is

TABLE 2

FATTY ACID COMPONENTS OF MATURE HUMAN MILK AND COW'S MILK*

| *Fatty Acid* | *Human Milk* | *Cow's Milk* |
|---|---|---|
| UNSATURATED | | |
| Linoleic | 10.6** | 2.1 |
| Oleic | 37.4 | 17.7 |
| Palmitoleic | 3.4 | 3.2 |
| Linolenic | Trace | 1.7 |
| SATURATED | | |
| Palmitic | 26.7 | 36.6 |
| Stearic | 8.3 | 8.1 |
| Myristic | 7.9 | 11.8 |
| Lauric | 4.7 | 3.6 |
| Capric | 0.8 | 3.2 |
| Caprylic | 0.1 | 1.2 |
| Caproic | 0.1 | 2.0 |
| Bulyric | 0.26 | 2.7 |

* Modified from report of Committee on Nutrition, American Academy of Pediatrics.[7]
** Mean values, expressed as percentages of total fatty acids.

considerably higher in human milk, as is the concentration of oleic acid. On the other hand, the shorter chain fatty acids are more abundant in cow's milk. It has been clearly demonstrated that the fatty acid component of human milk can be altered readily and within as short a time as two days by qualitative changes in the type of dietary fat.[8]

TABLE 3

VITAMIN CONTENT OF MATURE HUMAN AND COW'S MILK[5]

| *Vitamin Content (per 100 ml)* | *Human Milk* | *Cow's Milk* |
|---|---|---|
| Vitamin A | 53 (μg) | 34 (μg) |
| Carotinoids | 27 (μg) | 38 (μg) |
| Thiamine | 16 (μg) | 42 (μg) |
| Riboflavin | 43 (μg) | 157 (μg) |
| Nicotinic Acid | 172 (μg) | 85 (μg) |
| Pyridoxine | 11 (μg) | 48 (μg) |
| Pantothenic Acid | 196 (μg) | 350 (μg) |
| Folic Acid | 0.18 (μg) | 0.23 (μg) |
| Choline | 9 (μg) | 13 (μg) |
| Inositol | 39 (μg) | 13 (μg) |
| Biotin | 0.40 (μg) | 3.50 (μg) |
| $B_{12}$ | 0.18 (μg) | 0.56 (μg) |
| Vitamin C | 4.30 mg | 1.80 mg |
| Vitamin D | 0.4-0.10 I.U. | 0.3-4.0 I.U. |
| Vitamin K | 1.5 μg | 6 μg |
| Vitamin E | 0.35 mg | 0.10 mg |

A comparison of the vitamin concentrations (table 3) reveals that human milk contains more vitamin A and less vitamins D and K than cow's milk. The latter contains larger amounts of all the water soluble vitamins with the exception of vitamin C and niacin. Human milk contains three or four times as much vitamin E as does cow's milk and its association with a higher linoleic acid content may be of some teleologic significance.

Other differences between the two types of milk have been found although their role in infant nutrition remains obscure. Some of these are the higher urea level in human milk[5] and its content of a N-containing carbohydrate component essential for the growth of Lactobacillus bifidus.[9] The bifidus factor may account for the characteristic fecal flora and acid reaction of the feces of normal breast fed infants.

It should be mentioned that milk is not constant in composition from one human or animal to another at all periods of lactation or even hourly through the day and, therefore, the single figure given for each constituent implies an unreal precision. The variability of human milk is illustrated by a study of the protein concentrations of various human milk samples.[10] These ranged from 0.6 to 2.9 gm. per 100 ml., the maximum frequencies being 1.1 gm. protein per 100 ml. for milk from American mothers and 1.4 gm. per 100 ml. for the milk of European mothers. On the other hand, the general practice of pooling milk from an entire herd or several herds of cows tend to make its composition less variable although significant seasonal differences may persist.[7]

In infant feeding, cow's milk modified in a great variety of ways is the usual substitute when human milk is not available. The physician has a wide selection of simple methods of formula construction from which to choose, any one of which in all probability will be quite satisfactory. Modifications can be made using whole milk, evaporated or dried milk, but whatever the formula selected, certain essential requirements must be met if uniform success is to be attained. These were first enumerated by Marriott more than 25 years ago[11] and are just as applicable today. The feeding must provide: (a) sufficient calories, (b) sufficient protein, carbohydrate, fat, mineral salts, water and vitamins, (c) freedom from harmful bacteria and (d) easily digestible nutrients.

## Nutritional Requirements of Full Term Infants

The caloric requirements of the newborn infant are two to three times as great as those of the adult in terms of body weight. This reflects in part a high basal heat production due to his relatively greater body surface which favors loss of heat by conduction and convection and also his larger proportion of metabolically active tissue. In addition, the energy requirement for activity may be high, even in small infants. The allowance for calories is usually set at levels reflecting the general pattern of intake of thriving infants, which averages 120 calories per kg. per day (55 cal/lb/day) from 1 to 6 months and a somewhat lower value, 100 calories per kg. per day (45 cal/lb/day) from 7 to 12 months.[12] Also, it is generally accepted that a caloric distribution which provides for 15 per cent of the calories from protein, 35 per cent from fat and 50 per cent from carbohydrate is nutritionally sound for all ages. It is of interest to compare this caloric distribution with that of human milk and various modifications of cow's milk which have been employed in artificial feeding (figure 1). The fact that infants have shown satisfactory progress on feedings of such diverse composition may simply ". . . attest the adaptability of the baby to the whim of his caretakers."[14]

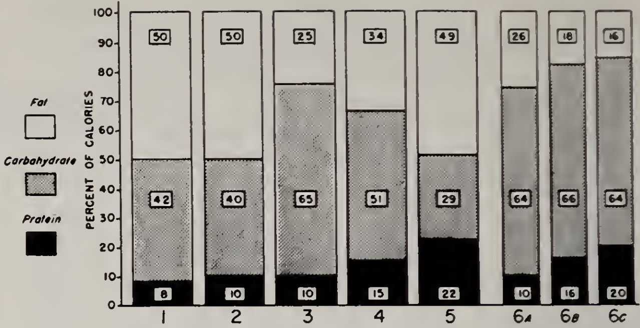

Fig. 1. The percentage of total calories in protein, carbohydrate, and fat. (Modified from Powers by Gordon and Ganzon.[13])

1. Mature human milk (with 7 to 8 per cent of its calories derived from protein) and some cow's milk mixtures early designed to simulate human milk.

2. Proprietary mixtures designed in this country to simulate human milk in protein content have 9 to 10 per cent of the calories as protein which is approximately 20 to 25 per cent more than in human milk.

3. Sweetened condensed milk.

4. The majority of cow's milk mixtures currently used in the feeding of well babies are in this group in which protein supplies 13 to 16 per cent of the calories.

5. Whole cow's milk without added carbohydrate.

6a. A concentrated partially skimmed cow's milk to which carbohydrate was added, used in France in feeding well babies. It is remarkably similar to sweetened condensed milk in its distribution of calories.

6b. A simple mixture in which milk from which half the cream has been removed supplies 2/3 of the calories and added carbohydrate the remainder; used extensively for feeding of premature and sick infants.

6c. Buttermilk-sugar-flour mixtures used traditionally in Holland; also a simple half-skimmed milk mixture with added carbohydrate used for feeding premature infants.

Controversy has reappeared recently over the protein allowance for young infants.[13, 15] Breast fed infants thrive on a protein intake of approximately 2 gr. per kg. per day, while infants fed conventional formulas of cow's milk ingest in the neighborhood of 3.5 grams of protein per kg. per day. In the absence of any data indicating nutritionally significant differences between cow's milk and human milk protein,[16] questions have been raised concerning the need for or the desirability of the higher protein intake of the artificially fed infant. In spite of numerous studies, there are no data convincing enough to provide an answer either in favor of or against the low or high protein intake. It is this lack of available evidence that led the Committee on Dietary Allowances of the Food and Nutrition Board of the National Research Council to omit any specific recommendation for protein allowance in infancy in the 1958 revision of Recommended Dietary Allowances.[12] Instead, breast feeding is urged as the desired and best procedure for meeting nutrient requirements. Where this cannot be carried out, the Committee stated that ". . . observations concerning protein utilization in infants fed cow's milk are extensive but permit only approximation of requirements. . . . When supplemented diets containing cow's milk in amounts of 600 to 1,000 ml. per day (average protein intake 3.2 to 4.3 gm. per kg.) are fed over long periods of time, there is nitrogen retention and good growth performance as determined by gains in body length and weight and clinical appraisal of the infants. Studies of nitrogen retention and growth performance of infants fed cow's milk formulas providing lower levels of protein intake are few in number and results too variable to permit use for determinations of specific allowances." In current practice, diets furnishing 3.5 grams of protein and more per kilogram are in common use. Until clinical trials and metabolic studies furnish more convincing evidence, it would seem unwise to modify a feeding practice which has demonstrated its general satisfactoriness for many years. It should be kept in mind that decreases in cow's milk intake to provide a protein intake equivalent to that of human milk may lower the intake of other important nutrients. In the experiments of Jeans and Stearns, infants fed cow's milk formulas with protein and calcium intakes adjusted so that retentions were of the same order as infants fed human milk, showed slower linear growth and poorer tissue turgor and motor development that breast fed infants or than artificially fed infants receiving higher intakes of protein and calcium.[17] On the basis of these observations, Jeans declared that the requirements of formula-fed infants should probably not be based on the requirements of breast fed infants. Although this evidence is not acceptable as indicating the biologic superiority of human milk over cow's milk protein, it suggests that human milk may contain other factors, the needs for which are not met by substituting cow's milk diluted to make it equivalent to the former in protein content.

In contrast to the controversy over protein allowances, there is general agreement about the importance of the size of the curd in the digestibility and utilization of milk, as emphasized by Brenneman many years ago.[18] Considerable nutrient material may be lost from the intestinal tract when raw or pasteurized cow's milk is fed, due to indigestible casein curds. Such varied processing technics as boiling, drying, evaporating or acidifying cow's milk will reduce curd tension to that of human milk and improve digestibility. The recognition of the need to alter curd tension represented a landmark in the progress toward successful artificial feeding. Heating the milk has the added benefits of decreasing the bacterial count and making cow's milk less antigenic.

Concerning the addition of carbohydrate to cow's milk mixtures, it is generally held advisable to bring the total percentage up at least to that in human milk, although the suggested amounts vary widely. Not only is this nutrient an important source of energy, but it also provides calories without imposing an additional solute load on the kidney for excretion. In studies of urinary solute excretion by rapidly growing infants fed alternately a food mixture of evaporated milk and water and then an isocaloric mixture containing added carbohydrate but less milk, an 85 per cent increase in solute load was noted for the formula without carbohydrate.[19] Obligatory water required for the renal excretion of this extra load, while adequate under normal conditions, might become depleted under uncompensated water loss from diarrhea, vomiting or impairment of urinary concentration. The use of a carbohydrate modifier in the formula also helps protect the infant against disturbances of water balance which are caused by high environmental temperature. In a report by the Committee on Nutrition of the American Academy of Pediatrics, water balance was calculated for infants on isocaloric diets of human milk, cow's milk with carbohydrate or unmodified cow's milk by making certain assumptions regarding retention of nitrogen and salts for growth and the infant's urinary-concentrating ability.[20] At an environmental temperature of 34 C. (93 F.) human milk can still provide an excess of water and so does the formula of cow's milk with added carbohydrate, but unmodified cow's milk does not. Actually the renal water requirements may be less than those indicated. The assumption that the kidneys of infants are unable to concentrate urine to more than 700 mosm/L is based largely on studies of edematous premature infants in the first 48 hours of life.[21] It has been shown in recent studies that young full-term infants free of edema are able to achieve considerably higher concentrations of solutes in the urine, particularly on high protein diets.[22]

Fat in milk is important as a concentrated source of energy, for its protein-sparing effect and as the purveyor of the fat soluble vitamins A, D and E. There is some evidence that humans, like other animals, require small quantities of polyunsaturated fatty acids. In a group of infants maintained on a fat free diet, a scaly dermatitis developed which was cured following addition of small amounts of polyunsaturated acids to the diet.[23] Unless there are specific indications for varying its amount, such as in the feeding of the premature infant and in steatorrhea, fat should be represented in the usual formula to the extent that it naturally occurs in milk.

The obligatory water loss of the infant through the kidney and the skin is considerably greater than that of the adult. In addition he is more subject to increased water loss by vomiting and diarrhea, so that symptoms of dehydration can appear rapidly. The allowance of 130 to 165 ml. of fluid per kg. per day (2 to 2½ oz/lb/day) is generally regarded as affording a safe margin for both breast and artificially fed infants. The old established procedure of diluting the required amount of cow's milk with sufficient water, after the addition of carbohydrate, to make the final formula isocaloric with human milk[24] has received recent support from considerations of osmolar load.

For the most part, the mineral requirements of the infant are not accurately defined. With the exception of iron, it may be assumed that the quantities ingested by the breast fed infant are well above his minimal requirements. Both cow's milk and human milk provide insufficient iron and when the stores present at birth become depleted iron deficiency anemia developes unless a supplement in the form of natural foodstuffs or medicinal iron is given.[25]

In the neonatal period, a hazard exists for the artificially fed infant from the larger content of calcium and phosphorus in cow's milk than human milk. Because of renal immaturity and temporary hypoparathyroidism, the serum phosphorus level becomes elevated and may precipitate neonatal tetany. Therefore, a dilute feeding is probably safer for the artificially fed infant during the first weeks of life.[26]

### FORMULA CONSTRUCTION

With the preceding discussion in mind, the problem of formula construction may be approached. A simple method is to construct a standard formula isocaloric with human milk with a satisfactory caloric distribution which can supply the necessary nutrients from the end of the neonatal period until 5 or 6 months of age, at which time whole milk can be substituted. The extensively used feeding mixture of one part evaporated milk, two parts water and 5 per cent of the total volume as added carbohydrate conforms to this recommendation (table 4).[24] The percentage composition of such a formula is 2.3 per cent protein, 2.6 per cent fat and 7.7 per cent carbohydrate with a caloric distribution of approximately 15 per cent from protein, 35 per cent from fat and 50 per cent from carbohydrate. The amount of the formula an infant would need is determined by dividing his caloric allowance by 20, the number of calories in each ounce of the mixture. It is generally held that the total quantity of formula should not exceed a quart and that solid food should be used to meet appetite demands beyond this point.

A second method of formula construction is to provide 1 oz. of evaporated milk or 1½ to 2 oz. of whole cow's milk per pound of body weight per day. Water is added to make the total fluid intake 2½ oz/lb/day and sufficient carbohydrate to make the final formula approximately 20 calories per oz. (table 4). Still another procedure suggested by Powers is to use a milk mixture in which two-thirds of the caloric requirement is supplied by milk and one-third as added carbohydrate.[27] This gives approximately the same caloric distribution as those already described.

TABLE 4

A. STANDARD COW'S MILK FORMULA[24]

| | | Calories | |
|---|---|---|---|
| Evaporated Milk | 11 oz. | 484 | |
| Water | 22 oz. | | |
| Carbohydrate | 1½ oz. | 180 | |
| | | 664 | (20 cal/oz.) |
| | *or* | | |
| Whole Milk | 24 oz. | 480 | |
| Water | 9 oz. | | |
| Carbohydrate | 1½ oz. | 180 | |
| | | 660 | (20 cal/oz.) |

B. COW'S MILK FORMULA FOR 10-POUND INFANT

| | | Calories | |
|---|---|---|---|
| Evaporated Milk | 10 oz. | 440 | |
| Water | 15 oz. | | |
| Carbohydrate | 1 oz. | 120 | |
| | | 560 | (22 cal/oz.) |
| | *or* | | |
| Whole Milk | 20 oz. | 400 | |
| Water | 5 oz. | | |
| Carbohydrate | 1 oz. | 120 | |
| | | 520 | (21 cal/oz.) |

A number of proprietary milk preparations are commercially available, some being simple modifications of cow's milk with added carbohydrate and others altered to simulate to a greater or lesser extent the caloric proportions, the protein content or the fat of human milk. Aside from their convenience, any advantages claimed for the "humanized" or other proprietary milks may be questioned, particularly since evaluation of feeding regimens based on their use is not yet as extensive as the accumulated experience with diluted cow's milk.

To return to the question of the nutritional superiority of human milk over the simple modified cow's milk formulas previously outlined, no clear cut answer is available due in part to the lack of precise criteria for optimal nutrition.[28] Those which have been employed include increase in weight, height, osseous and muscle development, concentration of hemoglobin or of other blood constituents and incidence of infection; but even when these parameters have been measured carefully, the results do not permit a critical answer. It is evident from several recent studies that artificially fed infants on properly constructed formulas thrive and perform equally with infants receiving human milk, and whatever differences are noted exist only for a limited period during early infancy.[29, 30] The increased morbidity and mortality rates from infections of the respiratory and gastrointestinal tracts which have been reported among artificially fed infants[31] may still prevail when facilities for the making and storing of feedings are inadequate and where professional supervision is lacking, but it is difficult to attribute these differences to any nutritional inferiority of cow's milk per se.

## Dietary Supplements

Due to its low content of iron as well as certain essential vitamins, milk alone cannot be considered a complete diet. The recommended allowances for essential vitamins during infancy are listed in table 5.[12] In infant feeding, ascorbic acid and vitamin D are the chief factors which merit concern. During the sterilization of milk, much of the ascorbic acid is destroyed and therefore supplements of 30 mg. a day should be provided in the form of a vitamin preparation or orange juice. Although scurvy is rare in the breast fed infant, even without supplements, these are commonly given. Since unfortified cow's milk and even breast milk cannot be relied on to furnish adequate vitamin D, this also must be supplied to insure an intake of 400 I.U. a day. A need for other vitamin supplements on an ordinary milk formula has not been established.

TABLE 5

RECOMMENDED DAILY VITAMIN ALLOWANCES DURING INFANCY[5]

| | |
|---|---|
| Vitamin A | 1500 I.U. |
| Vitamin C | 30 mg. |
| Vitamin D | 400 I.U. |
| Thiamine | 0.4-0.5 mg. |
| Riboflavin | 0.5-0.8 mg. |
| Niacin | 6-7 mg. |

In regard to solid foods, individual practice varies greatly as to the time they are introduced into the diet. Their purpose is twofold—to provide iron and to educate the infant to accept solid foods. The last several decades have witnessed the trend for their earlier introduction and in a recent survey some two-thirds of normal full-term infants were receiving solid foods prior to the 8th week of life.[32] While no one questions the nutritional inadequacy of a diet exclusively of milk in the first year of life, nor of the benefits of varied diets begun at 3 to 4 months of age, there is no evidence that solid foods introduced prior to this time are psychologically or nutritionally beneficial. In fact, satiation of hunger with nutritionally inferior solid foods can result in a decreased milk intake, the consequences of which may be detrimental. While documenting the trend for the earlier introduction of solid foods in the decade 1946-1955, Beal noted that the average age of acceptance of cereals, vegetables and meat had not changed appreciably in the 10-year period.[33] Acceptance was defined as the willingness of the infant to swallow food without protest within a two week period from its initial offering. Since 1948, the increasing difficulties recorded in feeding solids, with more crying and fussing, suggested the possibility that poor feeding habits later in childhood could be fostered by these early patterns.

In regard to the introduction of solid foods as a source of dietary iron, it has been shown that the iron stores at birth take care of the needs of the normal infant for the first two to three months and during this time administered medicinal iron is not incorporated into new hemoglobin. From about 6 months of age, the average full-term infant requires 8 mg. of iron daily, an amount which may be derived from dietary sources with optimal intake. However, recent studies have indicated that even with a good diet iron balance of term infants is precarious.[25]

## Nutritional Requirements of Premature Infants

Feeding premature infants must take into account their rapid growth rate, their need for adaptation to an extrauterine environment and their physiologic handicaps which require segregation to assure specialized care and diminish hazard of infection.[34] Their poorly developed swallowing and sucking mechanism prevents nursing so their feeding must be artificial, whether it be with modifications of cow's or human milk.

From an extensive series of metabolic balance studies, Gordon and Levine concluded that the nutritional requirements of the premature infant can be most satisfactorily met by a relatively concentrated feeding mixture high in protein, calcium and phosphorus and low in fat. To briefly review the evidence on which this conclusion is based, the following is a summary of some of their findings:[35]

(a) With fluid intakes of approximately 140 to 160 cc. per kg. per day, there was a positive water balance, while intakes of less than 100 cc. per kg. per day generally resulted in net water loss.

(b) A caloric intake of about 120 calories per kg. per day provided a sufficient excess above basal metabolic needs and the requirements imposed by physical activity and losses in the stool for adequate deposition of new tissue. Some infants maintained and still others lost weight on this fixed intake due to differences in energy expenditure, pointing out the need for individualization of feeding. The average requirement of 120 calories and 150 cc. of fluid per kg. per day was met by a relatively concentrated formula equivalent to 0.8 calories per cc.

(c) As protein intake was increased, nitrogen retention rose, with no difference in using isocaloric diets of human and cow's milk of equivalent protein content. Nitrogen retention on a cow's milk diet providing 5.0 gm. protein per kg. was three-fold higher in the premature than in the full-term infant and appeared to be related to the increased growth rate of the premature infants and the lower concentration of nitrogen in their bodies at birth.

Estimated nitrogen accretion during the 8th, 9th and 10th lunar months from chemical analyses of fetuses, rate of intrauterine weight gain and from nitrogen balance studies of premature infants, were 306 mg., 291 mg. and 177 mg. per kg. of average body weight per day, respectively.[36] It is generally accepted that after birth the premature infant needs to grow and adapt and that the protein allowance should permit a rate and composition of growth similar to that which would have occurred had he been able to remain in utero. For infants fed 6 to 10 per cent of the calories as protein, the measured retentions averaged 229 mg. per kg. per day. When protein comprised 13 to 20 per cent of the calories retentions averaged 315 mg. per kg. per day. It is obvious that either intake results in ample retentions for the 10th lunar month, but lower protein intakes produced inadequate retentions when compared to the calculated accretions for the 8th and 9th lunar months.

(d) The relatively high fecal fat losses on diets of whole milk mixtures containing 35 to 50 per cent of the total calories as fat indicated a defect in fat absorption by the premature infant. Quantitative reduction of dietary fat by the use of half-skimmed milk mixtures consistently led to diminished excretion of fecal fat.

(e) Premature infants are prone to develop rickets, presumably on the basis of low body stores of calcium and phosphorus at birth, their rapid rate of growth and their faulty absorption of fat soluble D. They have no defect in retention of calcium and phosphorus and on cow's milk mixtures plus vitamin D they retain proportionately more than full-term infants. On this basis it has been assumed that the feeding of cow's milk formulas with their higher calcium and phosphorus content might be beneficial.[37] The studies of Von Sydow[38] which showed that premature infants fed human milk had higher serum alkaline phosphatase and lower serum inorganic phosphorus levels than those fed cow's milk, findings which are similar to the biochemical alterations in rickets, supported this contention.

Human milk is relatively dilute, low in protein, calcium and phosphorus and high in fat and therefore cannot be considered the food of choice for premature infants. On the other hand, a feeding mixture consisting of half-skimmed cow's milk diluted with water and reenforced with carbohydrate, more adequately meets their nutritional requirements. Clinical evidence for the validity of this conclusion was the successful use by Powers for many years of a formula of similar composition in the feeding of premature infants on which they seemed to thrive more satisfactorily than on human milk.[39]

In a carefully controlled clinical study at the New York Hospital, Gordon and Levine fed isocaloric diets (120 calories per kg.) of processed human milk, a dilute evaporated milk carbohydrate mixture and a powdered partially skimmed cow's milk with added water and carbohydrate.[40] From the 7th to 28th day of life, infants with birth weights below the approximate mean of 3.5 lb. or 1.6 kg. who were fed cow's milk mixtures gained more weight than those fed human milk, and the infants fed the mixture of half-skimmed milk gained more rapidly than those fed evaporated milk. For larger infants the differences were in the same direction but were not statistically significant.

In view of the differences in ash content between cow's milk and human milk, the suggestion has been made that the increased weight gains of premature infants on cow's milk feedings are due to excessive water and electrolyte retention. Kagan et al. compared the weight gains of a group of infants on a diet of processed human milk with and without supplements of calcium caseinate, another group on a proprietary cow's milk preparation with the same protein, fat and carbohydrate content as human milk but with twice as much ash, and still another group of infants on a mixture of partially-skimmed cow's milk with added carbohydrate and sodium chloride.[41] Only 82 calories per kg. per day were provided, and all weight gains were considerably less than in the study of Gordon and Levine. Since the weight gain in the three groups on comparable low protein diets was greatest with the proprietary cow's milk preparation which contained approximately twice as much ash as human milk, the authors suggested that infants fed cow's milk at higher protein levels also gained weight from inordinate water retention. As Gordon has pointed out, however, on this marginal caloric intake, which probably was responsible for low weight gain, protein may have been used for energy and therefore was unavailable for tissue synthesis.[36] His finding that the water retention per weight gain ratios were the same (65 per cent) for infants fed human milk and for those on cow's milk mixtures fortified with carbohydrate is against the view of Kagan et al. Furthermore, Levin et al. have shown that premature infants fed sweetened half-cream dried milk gained weight more rapidly than those fed human milk. When sodium chloride was added to human milk to the same final concentration as the equicaloric cow's milk mixture, weight gain increased 11 per cent in a week as compared with a 35 per cent increase with the cow's milk feeding which had the same sodium chloride but higher protein and lower fat content.[29]

Aside from the influence of increased ash content of cow's milk mixtures on rate of weight gain, some workers have suggested that under certain circumstances this electrolyte load may cause excessive water retention. While premature infants can develop edema following a sudden shift from human to cow's milk,[42] persistent overt edema is uncommon in healthy premature infants ingesting moderate amounts of cow's milk mixtures. It has also been suggested that the increase in renal water excretion necessitated by the added electrolyte load of cow's milk may weaken the premature infant's adaptability to decreased intake or excessive extrarenal loss of water even though the increase in blood urea with the concomitant higher protein intake may lead to mechanisms for enhancing maximal tubular reabsorption of water and maximal osmolarity of urine.[22] It is for this reason that dilution of the half-skimmed cow's milk formula to a caloric concentration of 0.67 calories per cc. has been advocated for routine use.

During the first week of life, the premature infant is making numerous physiologic adjustments and the goal is to meet his minimum maintenance food requirements without exceeding his ability to ingest and retain the foodstuffs offered. Concerning the choice of method of feeding, i.e., nipple, medicine dropper, gavage or indwelling polyethylene tube, this will be determined by the individual infant's strength and the quality and quantity of nursing care available.[43] The schedule of initial feedings in table 6 illustrates a method of meeting the requirements by a gradually increasing food intake for an infant whose birth weight is 1,500 grams. If the infant has ingested and retained the amounts offered, maintenance caloric requirements are achieved by the 5th day and amounts of fluid and calories adequate for growth are reached by the 8th day. For infants of less than 1,500 grams it may be important to offer less than proportionately smaller amounts and the converse may be true for larger infants. In the case of very small infants, below 1,000 grams, it may be advisable to withhold feedings for 24, 48 or 72 hours and to make up the fluid requirements by parenteral supplements using a mixture of ⅓ saline and ⅔ 5 per cent glucose in water after the first 24 to 48 hours.

TABLE 6

INITIAL THREE HOUR FEEDINGS FOR PREMATURE INFANT, 1.5 Kg.[43]

| *Age* | *5% Glucose cc/Feeding* | *Feeding Mixture cc/Feeding* | *Total Fluid cc/Kg/24 hr.* | *Total Calories Kg/24 hr.* |
|---|---|---|---|---|
| 0-12 hr. | 0 | 0 | | |
| 12-24 hr. | 8 | 0 | 20 | — |
| 24-36 hr. | 8 | 4 | | |
| 36-48 hr. | 8 | 8 | 75 | 30 |
| | *Water* | | | |
| 3, 4, 5 days | 8 | 12-16 | 105-135 | 50-70 |
| 6, 7 days | 5 | 20-25 | 135-160 | 85-105 |
| 8 days | 0 | 30 | 160 | 125 |

Because of the tendency of premature infants to spontaneous hemorrhage, 2 mg. of vitamin K should be given parenterally as soon as the infant is born. Since premature infants are born with low stores of vitamin C, it is also advisable to give 100 mg. ascorbic acid daily after the first or second day of life. Additional supplements providing 500 units of vitamin D and 2,500 units of vitamin A may be started during the second week of life.

Like full-term infants, premature infants are born with low tissue stores and plasma concentrations of tocopherol and these fall even lower with partially skimmed cow's milk feedings.[44]

It is likely, although not yet shown, that premature infants fed more varied diets as they grow older will lag behind full-term infants in adequacy of tocopherol. In view of their rapid rate of growth, and in the absence of known toxic effects, small supplements of tocopherol are probably indicated even though no clinical, physiologic or biochemical correlates of deficiency have been found.

With qualified, interested nursing personnel and careful medical supervision, self-regulatory feeding has been shown to be feasible for vigorous premature infants.[45] For the larger premature infants whose vigor is such that one may expect to be able to put them to the breast not too long after birth, every effort should be made to maintain the mother's milk supply. This may help to allay some of the anxiety engendered by the unexpected birth of the infant and the variable period during which he requires specialized nursing and medical care and is separated from the mother.

## SUMMARY

Some of the empirical and experimental observations relating to the artificial feeding of premature and full-term infants have been reviewed. The available evidence indicates that full-term infants on simple modified cow's milk formulas will show satisfactory weight gains and development, with little difference in comparison to breast fed infants. Metabolic and carefully controlled clinical data indicate that the nutritional requirements of the premature infant can be most satisfactorily met by a relatively high protein, calcium and phosphorus, and low fat mixture. Some of the current controversies concerning protein requirement, renal solute load and other facets of infant nutrition have been described, and suggest that this subject is not a closed chapter.

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# Child Nutrition

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One of the best provisions for well-being in any period of life is to arrive at that period in good nutrition. The infant born of a healthy mother is sturdier throughout infancy than one born of a poorly nourished mother. A sturdy infant has nutritional stores to carry him through periods of stress and to give impetus to growth in the preschool years. If the child maintains excellent nutrition, he will have stores to be drawn upon during the rapid growth at puberty. The best insurance for a healthy infant is a mother who is healthy and well nourished throughout her entire life, as well as during her pregnancy. Although the importance of the nutritional status of the father is not as well documented, it is obvious that the diet habits of the parents decide the future dietetic standards of the home to a great extent.

Tremendous advances in nutritional knowledge and education in this century have almost eliminated nutritional deficiency diseases in our country. Knowledge is still increasing, and at an accelerating rate, fostered by universities, foundations and government and commercial agencies. Education in good dietary practices is reaching many peoples. However, many Americans are not as well nourished as they should be, primarily because of faulty diet habits. People who eat meat, dairy products, including fortified milk, green and yellow vegetables, citrus fruits or tomatoes, enriched or whole grain cereals at least once a day, should have no need for vitamin supplements.

## Modern Nutritional Advances

Advances in agricultural science and food technology have caused many changes in diets of children. The misconception that in the good old days, our fathers were healthier because they were eating so-called "natural" foods has been abandoned. We now know that we have a better food supply today in terms of nutritive value, safety, stability, variety, attractiveness, availability and convenience. Indisputably, improvement of the nutritive qualities of foods is one of the great contributions science has made to the public health. Here, and increasingly all over the world, health and long life are being maintained through dietary improvements: enrichment of flour, bread, cornmeal, rice and other cereals, addition of vitamin A to fluid skimmed milk, non-fat dry milk and table fats (as endorsed by the Food and Nutrition Council), the addition of vitamin D to milk (with the consequent elimination of rickets), fortification of table salt with iodine (helping to abolish simple goiter), fluoridation of public water supplies (to effect efficient, economic reduction of dental caries).

We have been more consistent and therefore more successful in applying general nutritional principles to the diet of infants than to older children. The reason is obvious—a higher percentage of American babies receives close medical supervision during infancy than during the preschool self-feeding stage. Once the child is in school, he is likely to be favorably influenced by school lunch programs and school nutritional teachings, which help to improve dietary habits at home. The adolescent boy has a voracious appetite and usually eats an adequate diet, with a high intake of milk. However, in our present culture, the adolescent girl is especially susceptible to poor diet habits, principally because of social pressures and misconceptions concerning normal maturation. A well-balanced diet may be acceptable if prescribed by a physician to improve her figure and help treat acne, but will be rejected if urged by the parents on the basis of health.

## Dietary Balance

The habits and emotional health of parents are major factors in forming eating habits. Most of our food habits are formed in early childhood and become progressively more difficult to change after the fifth or sixth year of life. It is important to stress the importance of balanced intake and the fact that this is best achieved through consumption of a wide variety of dairy products, eggs, meat, fruit and vegetables, rather than by the more limited selection of cereal products. The principal lesson to be learned by surveying the mass of new information on interrelationships of nutritive factors is an humble respect for balance in diet, and a healthy skepticism regarding the indiscriminate administration of single supplements. The frequently encountered preschool child who is not well nourished may be receiving an inadequate diet as the result of successive minor alterations to what was originally an adequate diet—and such alterations may even include the addition of supplements by a conscientious physician. Vitamin B preparations commonly prescribed are of questionable value. Except for therapeutic purposes and to supply vitamin D, no known need exists for special vitamin preparations in the feeding of healthy children.

Children whose diet is deficient in vitamin D show a wide range of ability to use calcium and phosphorus. From 300 to 400 units of vitamin D daily will produce optimum retention of these minerals in a normal child.[1, 2] An adequate intake of vitamin D-fortified milk (1½ to 2 pints daily) provides the vitamin D required.[3]

Insufficient milk is likely to lead to calcium deficiency. Milk, however, should not be considered solely as a source of calcium. It contributes a considerable amount of protein, as well as other essentials. During the preschool period when the calcium requirement is relatively less than during infancy, the requirement for protein is more. One to one and one half pints of milk should be taken after infancy up to the age of approximately 10 years and about a quart during the period of the prepubescent spurt.

Meat and eggs are good sources of the B group of vitamins. A child who drinks his prescribed allowance of milk receives most, if not all, of his requirement of riboflavin. Consequently, if a child is receiving a good intake of protein from milk, fish and eggs, the likelihood of deficiency of the B group of vitamins is negligible.

Protein deficiency during childhood is more common than is generally recognized. Without expert supervision, it is unlikely that the child, especially the preschool child, will receive an adequate protein intake unless he eats animal proteins such as milk, eggs, meat or fish.

One of the criteria which may be used for estimating the protein content of the body is the creatinine output in the urine. Creatinine excretion is closely related to the amount of muscle in the body. When children are fed ample protein, the creatinine excretion rises to a constant level for each child, with a narrow range at each age period. Creatinine data collected from the literature, as well as from studies made at the University of Iowa,[4] show that the majority of children from lower socio-economic groups have creatinine values below the theoretically normal curve when first observed. In all instances, the creatinine output increases promptly to the normal level when liberal amounts of protein are fed.

### GROWTH CRITERIA

The significance of height and weight as measures of normalcy for children[5] has been repeatedly questioned. There have been many attempts to supplement these measures with other determinations: description of body build, pelvic width, arm girth, chest circumference, skin thickness, in order to qualify the interpretations. None of these adds appreciably to the information gained from accurately plotting serial height and weight measurements. The concept of physiologic age is highly important—particularly in the prepubescent and adolescent periods. Expected gains in height and weight correlate with maturation. The level of the height-age curve in relation to the level of the weight-age curve is an index of the build and also the nutritional status of the child. When these curves have been obtained over a period free from chronic disease and adverse environment and diet, they will indicate the general build of the given child. Endomorphy, ectomorphy and mesomorphy will automatically appear. Too much emphasis cannot be placed on the importance of accurately plotted serial values. Too much effort has been expended attempting to evaluate a single or a few observations of height and weight in comparison to norms. Faulty conclusions stemming from such errors have resulted in considerable confusion and loss of confidence in growth data. Serial determinations plotted on suitable charts permit interpretation of the child's progress in relation to his own past and in relation to the pattern of growth of normal children growing and developing under favorable conditions. Rate of growth in length is a far better criterion of adequacy of nutrition in infancy and childhood than are changes in body weight.

### VITAMIN SUPPLEMENTS

Vitamin supplements are too often prescribed without reason or effect for a wide variety of major and minor complaints. The decision to use vitamin preparations in therapeutic amounts should rest exclusively with the physician. Excessive and unnecessary vitamin supplementation should be avoided. It is doubtful that anything but economic waste results from adding two or three times the calculated dietary requirement of vitamins to adequate diets. The more concentrated vitamin preparations are indicated only in the treatment of deficiency states or pathologic conditions in which requirements are increased. In my opinion, these concentrated preparations should not be dispensed without a prescription. Excessive amounts of fat-soluble vitamins in therapeutic mixtures are potentially dangerous. For instance, daily intake of 1,800 USP units of vitamin D, continued over a period of months may be mildly toxic in infants and small children.[6] The earliest symptom of vitamin D intoxication is anorexia, while later symptoms and signs may include weakness, fatigue, headache, polyuria, renal damage and metastatic calcification. Chronic vitamin A intoxication can also result from prolonged ingestion of more than 50,000 USP units daily of vitamin A.[7]

Malnutrition, especially during childhood, is an important factor in the origin and gravity of many conditions requiring hospital care. Ketosis and dehydration, the most common complications for which medical and hospital care are necessary, can be prevented by proper use of electrolyte and sugar solutions as part of the treatment of young children with infections, especially of the respiratory and gastrointestinal tract. Many physicians advise the mother to prepare electrolyte solutions for oral use from table salt (sodium chloride), baking soda (sodium bicarbonate) and sweetened fruit juices. Solutions made from these salts should not be too concentrated: about ¼ teaspoon of salt and ½ teaspoon of soda to about a quart of liquid. Sugars in concentrations of about 5 to 10 per cent are useful to help prevent ketosis. Small amounts of skimmed milk, alternated with sweetened fruit juices at frequent intervals, provide essential electrolyte sugar, as well as high quality protein and other essential nutrients. Daily vitamin supplements are useful during such periods of stress. Commercially prepared mixtures of salts and carbohydrates containing known amounts of electrolytes are also available.

Too frequently, the patient's diet receives no special attention from the physician. Yet the nutritional state of the patient influences not only the development and regression of many diseases, but also many diseases, whether infectious, metabolic, degenerative or neoplastic, influence the nutritional status of the patient. Consequently, an evaluation of a patient's food habits is desirable for prevention as well as for treatment of disease.

There is considerable evidence, especially during childhood, that nutrition is an important factor in the genesis and severity of rheumatic fever.[8, 9] The diets of children with rheumatic fever are usually inadequate in some essential elements. Although no single component of the diet has been shown to be consistently deficient, all of the major studies show a marginal or low protein intake.

## Management of the Hospitalized Child

Modern medical treatment is characterized by more frequent hospitalization for children. This may be to provide a more convenient arrangement for the parents, the doctor, or both. It may also permit more comprehensive study and treatment of emotional problems. However, many factors must be considered in adequately meeting the needs of the hospitalized child. Among these is the failure to define responsibility for care of patients between various services. Auxiliary workers often are poorly trained and have ill-defined responsibilities, yet have had to be employed in most nursing and dietary departments. The physician has a direct responsibility to act as coordinator between the various hospital services to insure adequate care of the patient. He must transmit to the dietary department, by specific orders, the nutritional requirements of the patient and the number of meals he is to be offered, in keeping with his capacity to tolerate food. Routine trays providing enough and good food avail little if the patient is unable or unwilling to eat. The physician must transmit to the nurse exact instructions on feeding the child, stating whether he is to be fed or helped, whether he is to eat alone, or with other children, whether parents can be present to help, or whether they should be dismissed at mealtime. It is the physician's responsibility to know if the child is taking and retaining food as offered; to confer with the nurse and dietitian (preferably at ward rounds), and to modify the regimen to meet the nutritional needs of the patient. Active support and participation of the doctor is necessary if any hospital care program is to be successful.

In this cooperative approach to the care of children, both the dietitian and the nurse have also to carry their share of responsibility. The dietitian should transpose the dietary orders of the physician into food, taking into consideration the child's past eating experience, and not over-looking the importance of size, color and consistency of food in keeping with the child's developmental age. The nurse should prepare the child to look forward to eating and should take time to offer the food so that meal times are pleasant and educational.

There is no substitute for working with the patient and taking care of him directly. Medical education is turning more and more in this direction; it is unfortunate that nursing education is tending to go away from it. Also, the dietitian in many hospitals has so many administrative duties that she has too little time for direct patient contact; and too often she does not have adequate medical supervision.

In many hospitals, children are fed at the same hour as the hospital staff, so that often an inexperienced nursemaid or diet maid is assigned to the important task of feeding the child. A method must be found to individualize food service to children of various ages, specifically in relation to size of portions. "Self service" is not the only or the best answer to individualization. A child's physical condition, family background and eating habits must be considered. At the same time, good food habits should be encouraged as much as possible. It is well known that children are reluctant to try new foods completely on their own.

### The Need for Public Education

There is a profound need for public education of parents and school personnel to help build good eating habits for our children. The unintentionally pernicious habit of selling confectionary foods in schools to finance activities should be discouraged. Candy and soft drink machines should be replaced with fruit, sandwich, nut and milk dispensers. Effective parent education could result in improved eating habits in the home. There should be less eating in front of television and less consumption of the refined sweets and beverages advertised there. Skilled personnel, trained to break down public inertia to this problem, needs to be provided. The medical profession should lead in this endeavor as an integral part of its professional and community responsibility.

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# Nutrition in Adolescence

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THIS DISCUSSION CONCERNS nutritional needs for the growth period just prior to puberty through maturation into adulthood. This spans the time from approximately 9 to 18 years of age, and has been extensively reviewed.[1-4]

The physical, psychologic, and nutritional aspects of normal healthy adolescence and some of the problems that may occur during this time will be considered. The obvious sex differences between boys and girls with regard to actual ages at which various changes take place will be set aside in favor of their physiologic ages—recognizing throughout the discussion that chronologically the young women have a lead of 1½ to 2 years in the process of maturation over young men.[5]

To best orient with regard to the features of adolescence, Scammon's diagrams in figure 1[6] shows that the central curve for general growth is a composite of all of the aspects of a child's development, from zero at birth to 100 per cent of scale at adult size. It presumes a normal genetic makeup of the individual and adequate nutrition throughout growth. The rapid rise in the latter portion of this growth curve may be noted beginning at puberty and extending to 100 per cent at completion. The second curve of importance is that of central nervous system development. This demonstrates clearly the remarkable early increase in mass of the brain structure to almost adult size by the age of puberty. While actual increases in mass from this point to complete maturation is small, there are numerous processes of cellular maturation which coincide with the over-all patterns of adolescence. The third curve represents the hormonal secretions, showing them to be at quite a low level until just prior to puberty. At that time, they gradually begin to rise in concentration with a progressive increase to maturation. The fourth curve shows the large increase in lymphoid tissue prior to puberty with a gradual decrease from then to adult levels. The interrelationships of these curves serve as the keystone for our consideration of the nutritional needs of the adolescent. It is evident from an examination of the tremendous changes taking place during this period that adequate nutrition would be necessary for satisfactory completion of the normal trend of each of these aspects of development.

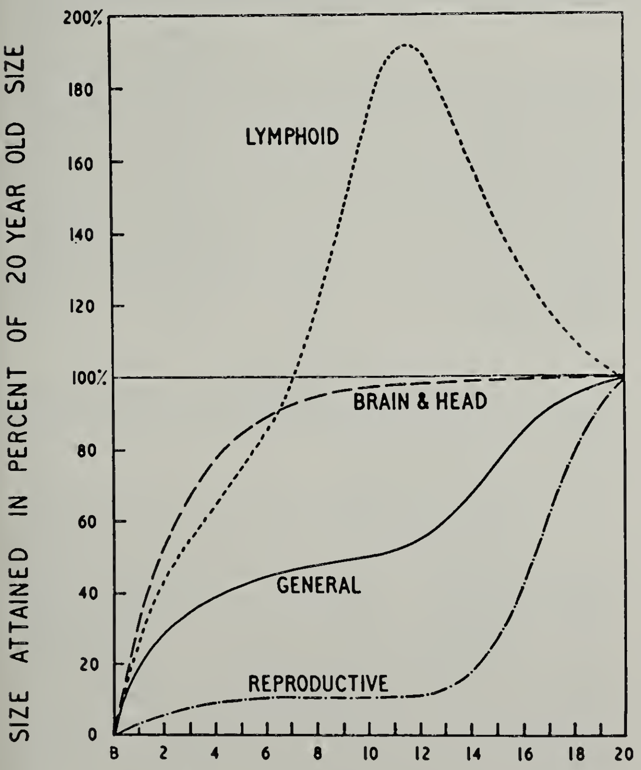


Fig. 1. Changes in the four main types of body growth during the first 20 years of life.

Figure 2 focuses attention more clearly on some of the specific factors involved in these interactions. A brief résumé of the hypothalamic-anterior pituitary-hormonal axis as it relates to adolescence is of importance for better understanding of the anabolic forces involved in this growth phase.[7] It has been shown in studies in animals and humans that the hypothalamus serves as a control center for inhibition and stimulation of the formation of trophic hormones by the anterior pituitary. These trophic hormones stimulate the elaboration of specific hormones by various glands throughout the body. In turn, these hormonal secretions have a feedback effect on the hypothalamus and anterior pituitary causing inhibition of further formation of excess hormones. It is within this framework that the growth hormone of somatrophic hormone is elaborated by the anterior pituitary and acts as the major factor in cellular stimulation and nitrogen retention in development. Through the action of the other trophic hormones, individual hormones are secreted in other glands in small amounts during the younger ages. Throughout the earlier years, the hypothalamus appears to be quite sensitive to the prevailing low concentrations of these hormones, particularly the gonadal hormones in the blood, thereby limiting the degree of hypothalamic stimulatory effect and preventing the increased formation of gonadotrophic hormones.[8] However, as puberty draws on, there is apparently a decrease in the degree of sensitivity of the hypothalamus to gonadal hormones. This results in the stimulation of the anterior pituitary by the hypothalamus with the production of more gonadotrophic hormone and consequent increases in gonadal hormones. Simultaneously, there is an increase in all of the other trophic hormones of the anterior pituitary causing increased activity in the adrenals and thyroid.[9] The changes in glandular size that occur during this period are shown in table 1.[10] The anabolic effect on cellular metabolism of the increases in all the hormones is the appearance of the new physical and psychologic parameters of adolescence.

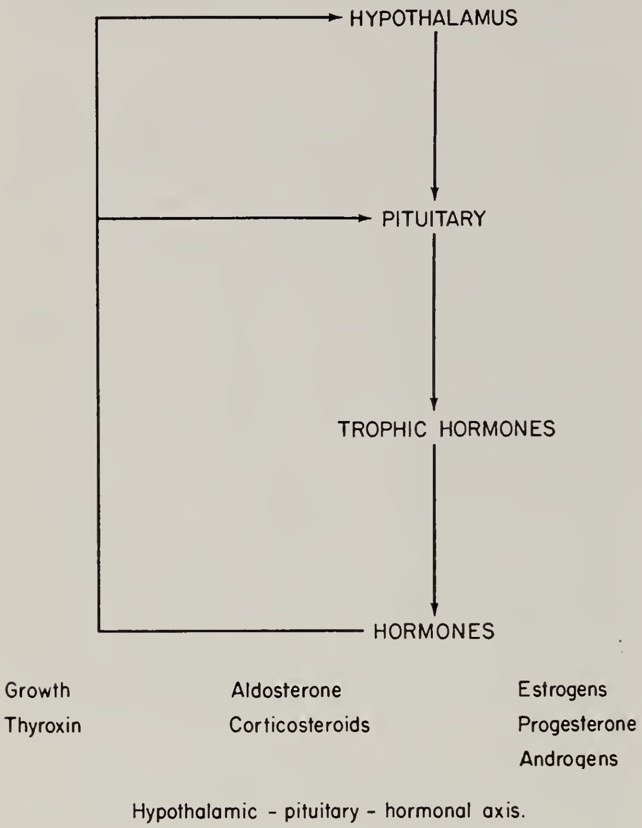


Fig. 2. The interrelationships of the hypothalmic-pituitary-hormonal axis.

Under the impact of these hormonal forces, there is a progressive enlargement of most portions of the body resulting in increases in the metabolic capacities of various viscera. Table 2 lists average figures for a number of these and indicates the degree of change that may normally occur from puberty to the adult size.[10, 11] Effects of growth hormone and gonodal hormones diminishes with time, so that under normal circumstances the hypothalamic-anterior pituitary-hormonal axis becomes stabilized, reaching equilibrium at maturity.

### TABLE 1

### GLANDULAR GROWTH IN ADOLESCENCE

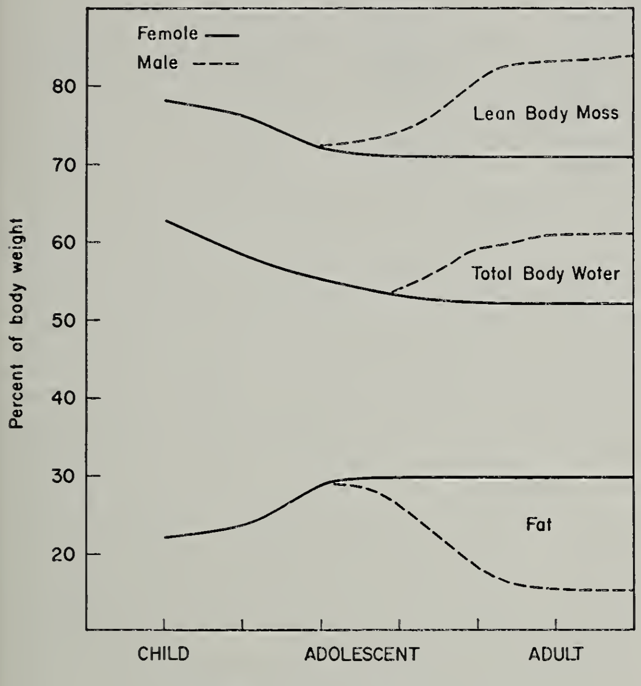
| | *Early Puberty* | *Young Adult* |
|---|---|---|
| Thyroid | 15 gm. | 35 gm. |
| Ovaries | 5 | 7.5 |
| Testes | 20 | 50 |
| Pancreas | 30 | 90 |
| Adrenals | 6.3 | 11 |
| Pituitary | 0.3 | 0.7 |

### TABLE 2

### PHYSICAL CHANGES IN ADOLESCENCE

| | | *Early Puberty* | *Young Adult* |
|---|---|---|---|
| Height: | Male | 135 cm. | 175 cm. |
| | Female | 132 cm. | 162 cm. |
| Weight: | Male | 30 kg. | 63 kg. |
| | Female | 29 kg. | 54 kg. |
| Blood Volume | | 2,500 cc. | 4,900 cc. |
| Liver | | 1,500 gm. | 1,750 gm. |
| Small Intestine | | 600 cm. | 750 cm. |
| Large Intestine | | 110 cm. | 150 cm. |

The changes in body structure during adolescence are coincidental with alterations in body composition and the gradual emergence of adult patterns. Figure 3 represents the trends in lean body mass, body water and fat.[12, 15] From childhood to adolescence lean body mass gradually decreases to approximately 72 per cent during the early phases of puberty. Coincidentally, the fat portion of body mass gradually increases to approximately 28 per cent during puberty. These percentage compositions are reasonably similar in young boys and girls with marked divergence only after puberty. Under normal circumstances, the male shows a progressive increase in lean body mass with gradual loss in fat resulting in an adult composition of approximately 84 per cent and 16 per cent respectively. In contrast, the female tends to retain the lean body mass to fat relationship of puberty with gradual increase in total size, resulting in adult figures of 71 per cent and 29 per cent respectively.



Changes in body composition with aging.

Fig. 3. The changes in body water, fat and lean mass with aging.

The percentage changes in body water composition both intracellularly and extracellularly progressively decrease throughout childhood and adolescence. This results in an over-all decrease in total body water to adult figures of 61 per cent for male and 54 per cent for female.

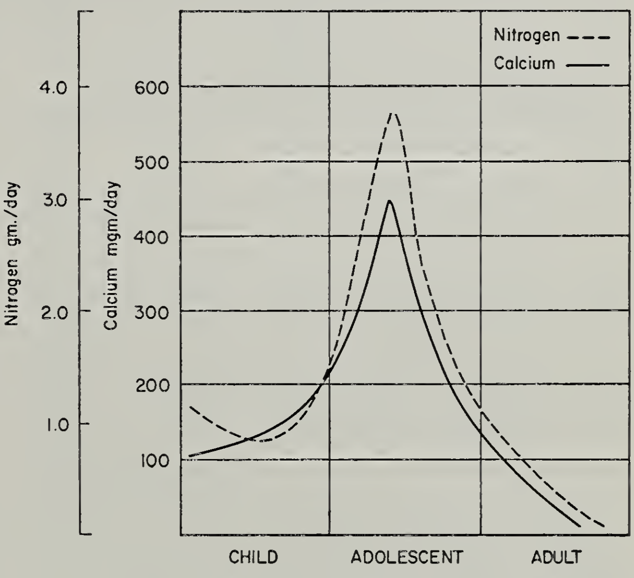
TABLE 3

BLOOD VALUES FOR ADOLESCENCE

| | |
|---|---|
| Glucose | 65.0— 90.0 mg.% |
| Proteins | 6.0— 6.8 gm.% |
| Cholesterol | 150.0—230.0 mg.% |
| Calcium | 4.5— 5.0 Meq/L |
| Phosphorus | 2.5— 4.5 Meq/L |
| Phosphatase (Alk) | 2.0— 5.0 Bodansky Units |
| Erythrocytes | 4.7— 5.3 million |
| Hemoglobin | 14.5— 16.5 mg.% |

Some of the biochemical measurements that are of value in determining the nutritional status of the adolescent are shown in table 3, i.e., the ranges of normal values that may be anticipated during this age period. Glucose, total proteins, cholesterol and calcium are unchanged from childhood. However, phosphorus and alkaline phosphatase show a distinct drop as bone maturation progresses. On the other hand, the erythrocyte count and hemoglobin content rise to new levels from those seen in the child.

The usefulness of these biochemical measurements is enhanced by their being performed at intervals throughout the maturation process, particularly in balance studies that permit us to determine the physiologic processes of absorption and retention by the body. Figure 4 summarizes the patterns of the increased absorption and retention of nitrogen and calcium for soft tissue and bone formation in the developing adolescent. This graph is designed to represent schematically the total retention of nitrogen and calcium on a daily basis as a result of the increased dietary intake and hormonal increases of the rapidly growing individual.[12, 16-18] The contrast of the adolescent portion of the curves with that of the child and the adult clearly demonstrates the tremendous quantities of both of these substances that are retained for growth. As can be seen, while the nitrogen retention during late childhood may rise to approximately 1 gram per day, with the onset of puberty, retention in-



Daily retention of nitrogen and calcium by age groups.

Fig. 4. Patterns of increases in nitrogen and calcium retention during adolescence.

creases markedly to from 3 to 4 grams a day. This subsequently falls off rapidly to lower levels as sexual maturation takes place and, with the passage of time, eventually reaches the equilibrium state found in the fully developed adult. Similarly, calcium retention, while fairly active during the period of childhood, takes a tremendous spurt during adolescence, up to 400 or 500 mg. per day, again rapidly falling toward lower levels and finally to equilibrium by adulthood.

TABLE 4

CALORIC REQUIREMENTS PER KG. PER DAY DURING ADOLESCENCE

| Years | 9 to 12 | 12 to 15 | 15 to 18 |
|---|---|---|---|
| BMR | 42 | 37 | 29 |
| SDA | 5 | 4 | 3 |
| Growth and Exercise | 25 | 17 | 10 |
| Unused | 4 | 5 | 4 |
| Total | 76 | 63 | 46 |

Two other metabolic phenomena that show interesting changes at the time of adolescence are the creatine-creatinine relationships[19] and the basal metabolic rate.[20] During the earlier years of growth and development creatinine appears in the urine as a waste product along with creatine, an unused metabolic substance. As puberty approaches and maturation moves on through adolescence, there is a gradual diminution in urinary creatine as a result of changes in muscle mass and metabolism that appear to permit a complete degradation of this substance to creatinine. The quantity of creatinine excreted as a waste product is increased and eventually becomes constant with relation to the muscle mass, ranging from 1.5 to 2.0 grams per 24 hours in the male and 0.9 to 1.5 grams per 24 hours in the female.

The basal metabolic needs during growth and development range from 60 calories per kilogram of body weight in infancy through 50 in childhood, decreasing to 40 at early adolescence. While the general trend is one of diminution, a small increase of approximately 10 to 15 per cent has been observed just prior to puberty.[16] This is followed thereafter by a continued drop in caloric need. Considering caloric requirements of the individual in a broader sense, table 5 shows progressive decreases in body requirements for growth and exercise with rather stable needs for specific dynamic action of foods and losses through the unused portion of the diet.

As has been indicated, the process of adolescence is comprised of legions of biochemical changes and alterations in body mass and composition. All of these along with energy needs for activity require adequate caloric intake. Furthermore, adequate caloric intake is necessary to prevent the wasteful utilization of important materials such as essential amino acids which may otherwise be released from already formed body tissues. The percentage composition of diets providing the necessary quantity of calories has been determined to be optimum in the range of 15 per cent protein, 35 per cent fat and 50 per cent carbohydrate. The availability of protein in the diet is ordinarily one-third from vegetable sources and two-thirds from animal sources. In addition to protein, fat and carbohydrate, the body requires a daily consumption of water of approximately 3 to 7 per cent of body weight or about 1 cc. per calorie of food intake. Table 6 gives a composite of the calorie-protein-water requirements during adolescence.[21] While total consumption of these factors increases with body size, the quantities per kilogram decrease.

TABLE 5

DAILY REQUIREMENTS DURING ADOLESCENCE FOR CALORIES, PROTEIN, WATER

| *Years* | *Cal./Day* | *Prot./Kg.* | *Water/Kg.* |
|---|---|---|---|
| 10-12 | 2500 | 2.5 gm. | 75 ml. |
| 13-16 | | | |
| Boys | 3100 | 1.5 gm. | 50 ml. |
| Girls | 2600 | | |
| 16-19 | | | |
| Boys | 3600 | 1.1 gm. | 50 ml. |
| Girls | 2400 | | |

TABLE 6

DAILY REQUIREMENTS FOR MINERALS

| *Years* | *Ca* | *P* | *Fe* | *I* |
|---|---|---|---|---|
| 10 to 12 | 1.2 gm. | 1.2 gm. | 12 mg. | Trace |
| 13 to 15 | | | | |
| Boys | 1.4 gm. | 2.1 gm. | 15 mg. | Trace |
| Girls | 1.3 gm. | 1.9 gm. | 15 mg. | Trace |
| 16 to 19 | | | | |
| Boys | 1.4 gm. | 2.1 gm. | 15 mg. | Trace |
| Girls | 1.3 gm. | 1.9 gm. | 15 mg. | Trace |

Although some latitude is possible in the percentage interrelationships of dietary composition of protein, fat and carbohydrate, excesses in any one at the expense of the other two is not desirable. Positive nitrogen balance must be maintained, 160 mg. of retained nitrogen being needed by the body for the formation of 1 gram of protein. However, protein intakes of 20 per cent or more are not well tolerated and may have undesirable effects.

Recent experimental studies in animals have led to the hypothesis that the individual tendency to form cholesterol and/or fat may to some degree be controlled by the quantity of hydrogen available from glucose and fat in the diet.[17, 18]

The number of hydrogen atoms present may determine the pathway followed for the completion of the molecular structures initiated by the presence of quantities of acetyl-Co-A.[22, 23] Acetyl-Co-A is formed primarily from the metabolism of glucose and secondarily from fat and protein.[2] The tissues are capable of utilizing it through the acetoacetyl Co-A mechanism to form cholesterol and fat when a moderate amount of hydrogen is available from glucose-6-phosphate. With limited amounts of hydrogen from glucose-6-phosphate, such as one sees in starvation and diabetes, the trend is preponderantly to cholesterol formation. In contrast, an excessive intake of glucose and fat in the diet will provide an overabundance of hydrogen, resulting in the molecular components for abnormal cholesterol and fatty tissue formation, the net molar hydrogen requirement for fat synthesis being eight times that for cholesterol.

As indicated previously, the retention of minerals increases during adolescence requiring continued ingestion of adequate amounts of these materials. Table 6 lists the recommendations of the Food and Nutrition Board of the National Research Council for these substances.[21] In addition, other daily mineral requirements include: sodium, 3 to 7 gm.; potassium, 1.5 to 4 gm., and magnesium, 100 to 300 mg.

Of these minerals, iron deserves special mention. During the process of growth from infancy to adulthood, the iron content of the body increases from 0.4 grams to 4.5 grams. The problem of relatively low dietary content of iron coupled with its limited intestinal absorption may result in a borderline deficiency of iron during adolescence. Furthermore, the onset of menstruation in the female may lead to untoward losses that cannot be replaced from routine dietary sources. For these reasons, the recommended intake of iron for adolescence is two to three times that of childhood.[24]

Finally, the vitamins come under consideration. Touted as they are by some and decried by others, it is not my purpose to join the struggle, but rather to reaffirm their importance as essential elements in body metabolism. Certainly patients with gross deficiencies such as scurvy and rickets are now rarely seen in their country. However there is an increasing body of evidence that is now focusing attention on their importance in subclinical deficiencies as well as in long-term problems. In these roles, vitamin deficiencies do not produce glaring clinical deformities, but rather may cause minimal intracellular derangements that acquire increasing significance as the aging process progresses. Recommendations for daily intake of vitamins by the Food and Nutrition Board are contained in table 7.[21]

TABLE 7

DAILY REQUIREMENTS FOR VITAMINS

| *Years* | *A* *IU* | *$B_1$* *mg.* | *$B_2$* *mg.* | *Niacin* *mg. eq.** | *C* *mg.* | *D* *IU* |
|---|---|---|---|---|---|---|
| 10 to 12 | 4500 | 1.3 | 1.8 | 17 | 75 | 400 |
| 13 to 15 | | | | | | |
| Boys | 5000 | 1.6 | 2.1 | 21 | 90 | 400 |
| Girls | 5000 | 1.3 | 2.0 | 17 | 80 | 400 |
| 16 to 19 | | | | | | |
| Boys | 5000 | 1.8 | 2.5 | 25 | 100 | 400 |
| Girls | 5000 | 1.2 | 1.9 | 16 | 80 | 400 |

* Niacin equivalents—preformed vitamin + precursor, tryptophan, 60 mg./1 mg. niacin.

The foregoing provides some guide lines as to the essential nutrients and energy requirements of the adolescent to realize full growth potential and withstand the stress of development. These can best be met by the daily ingestion of three satisfying meals that should include:

1. Two pints of milk (whole or skim), either as a beverage or in foods.
2. Three servings of high protein foods such as meat, poultry, fish, cheese, eggs, nuts or legumes.
3. Five servings of vegetables and fruits with at least one green or yellow vegetable, and citrous fruit or tomato.
4. Three servings of enriched or whole grain cereals and bread with butter or margarine.
5. Desserts, sweets and snacks in moderation will supply additional calories and lend variety to daily menus.

Proper nutrition combined with adequate exercise, recreation, rest and sleep, are the necessary factors in developing good physical endurance and stable central nervous system activity. Results of such a successful regime are reflected in the individual's psychologic attitudes and physical appearance. Body contours follow normal patterns with good skeletal muscle and subcutaneous tissue maturation. The skin and mucous membranes show a healthy pink glow with a minimum of blemishes. Hair growth is luxurious with smooth glossy appearance. Digestion, elimination and sleep are satisfactory.

The physical and biochemical aspects of nutrition have been considered and now the equally important psychologic and socio-economic forces in adolescence will be discussed.

In the over-all picture, these factors may influence to a great extent the opportunity for the individual to attain the desired goal of adequate nutrition. They include:

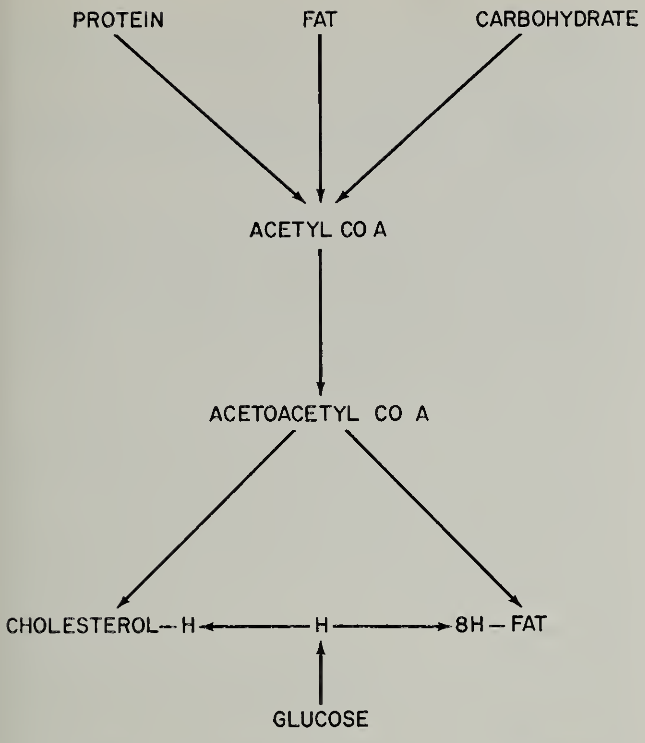
1. Ignorance on the part of the family and the child as to the necessity of good nutrition, the composition of a balanced diet and its preparation.
2. Inadequacy of economic resources that would preclude the availability of the necessary foodstuffs.
3. Personal eating habits that may limit adequate nutrition, even in the presence of a well-balanced diet. A number of dietary surveys have clearly shown that the busy, monied teenager is quite apt to partake of no or at best wholly inadequate meals at breakfast or lunch.[25] Hunger may be satisfied with snacks of so-called "empty calories" of high carbohydrate content or by cigarette smoking.[26] While dinner may be a nutritious meal, it is generally not sufficient to provide for all the dietary needs. Such a program is likely to result in deficiencies of protein, ascorbic acid, riboflavin, calcium and iron. In addition, the family crises that may arise from this bizarre approach to meals may further contribute to the adolescent's resolve to be his own boss and rebel against the conformity of good eating habits.
4. Fads regarding dietary intake may lead the adolescent far afield from adequate nutrition. Young ladies are often given to extremes in endeavoring to control their body weight to produce desirable slimming effect. They resort to minimal dietary intakes which may be deleterious. In contrast, young men with the urge to augment their strength may ingest large quantities of so-called specially prepared formulas of high protein, vitamin and amino acid content. Finally, in selected situations, some youngsters may come under the influence of various drugs, such as amphetamines, alcohol, nicotine and narcotics.

These problems can best be approached through the continued public health service of education of the general population as to the importance of good nutrition and the means of obtaining it.[27]

The discussion thus far has been concerned with the basically healthy child. Let us now consider some of the more complex nutritional problems of infections, emotional disturbances, hormonal imbalances, obesity and undernutrition. Rapidly growing youngsters whose nutritional needs are poorly satisfied may not be capable of inadequate immunity responses.[28] They may be readily susceptible to various diseases such as rheumatic fever and tuberculosis.[29] With improvement in general nutrition, the statistical incidence of these diseases is markedly reduced. Recent research work in control of rheumatic fever through evaluation of specific dietary components has led to the isolation of an alcohol-soluble fraction of egg yolk (N 2-hydroxyethyl palmitamide) that may be of value prophylactically.[30] Studies of this type may eventually lead to the establishment of more clear-cut relationships between immune mechanisms and dietary composition.

The adolescent is particularly predisposed to problems of obesity. Genetic background,[31] previous nutrition and family eating habits may all have established a tendency to overweight as the child approaches adolescence. The normal prepubertal fat phase, hormonal stimulation and coincidental emotional disturbances all may further contribute to the problem with the establishment of patterns of excessive caloric intake. Results may be likened to the snowballing effect of compound interest with progressively increasing increments. The situation of "overweight" with some 10 per cent over normal standards for size rapidly changes to the range of an excess of 25 per cent of true obesity. The changes in body contour and additional weight readily leads to decreased participation in exercise and recreational sports as well as to psychologic problems with regard to self and environment. Recalling the suggested theory for excessive fat formation outlined in figure 5, it can be seen how excesses may drive chemical molecular formation to increased quantities of fat with its deposition.[18]

While on occasion obesity may be traced to hypothyroidism or to severe endocrine dysfunction such as Cushing's syndrome, almost all cases can be shown to have a strong psychologic component coupled with the ingestion of too many calories.[32] Therapy must therefore be twofold in an effort to alleviate the unlerlying emotional factors and to limit the caloric intake. The youngster should be maintained on adequate vitamins, protein and minerals. Protein intake should be



Possible mechanisms for cholesterol or fat synthesis.

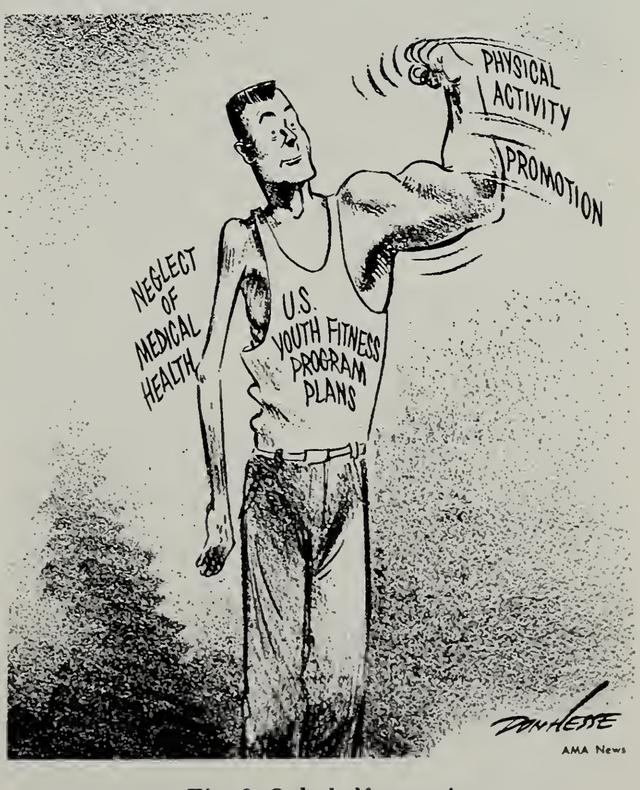
**Fig. 5. The possible mechanism of cholesterol or fat synthesis in the presence of variable quantities of hydrogen from glucose-6-phosphate.**

raised to 20 per cent of calories, with limitation of calories from fat and carbohydrates to a total of 1,000 to 1,200 daily. Prepared diets such as Metrecal and similar formulas may have merit in facilitating this undertaking. The numerous anorexogenic agents and metabolic stimulants are of limited usefulness. They may have value in helping the patient with initial weight loss so that they may be further encouraged to continue the long-range program of controlled dietary intake.

Undernutrition occurs when caloric intake and essential nutrients fall below the necessary limits for normal cellular metabolism. The body then metabolizes endogenous proteins and fats with gradual debility, listlessness, nervous system hyperirritability and decrease in immune responses to disease. Appetite diminishes, anemia develops, edema may appear and normal tissue structures waste away. These latter severe changes are most likely to occur under conditions of prolonged food deprivation. Varying degrees of undernutrition may also be seen in patients with hyperthyroidism, in the psychiatric disturbance of anorexia nervosa, and in inadequately treated diabetes.[18, 33]

Therapy must be guided by the specific needs of the individual as well as the severity and duration of the undernutrition.[24] In the border-line cases of moderately poor dietary intake, or endocrine dysfunction, changes in diet content and habits, along with specific hormone therapy, may correct the problem. In patients with severe debility, a program of small feedings of gradually increasing caloric content and nutrient composition must be followed in order to avoid injury or death. In some, intravenous feeding or gavage feeding by indwelling polyethylene tubing must be used. Patients with anorexia nervosa will also require extensive psychiatric help and long-term guidance in rehabilitation.

A number of aspects of nutrition for both healthy and sick children have been considered as they grow through the important transition phase of life to become adults. An improved understanding of these nutritional requirements along with advances in medicine during the last 50 years has resulted not only in the prolongation of life but also a progressive increase in man's body size. A comparison of recent statistics with those from the early 1900s shows an increase of approximately two inches in height and 10 pounds in weight by the end of adolescence.[34] Furthermore, the present-day individual with larger stature metabolically experiences an earlier puberty by as much as six to 18 months and



AMA News

**Fig. 6. Only half a man!**

proceeds with larger increments of growth to maturation.[35]

Coincidentally, many environmental changes have occurred with new standards of living that involve less physical labor and exercise. The emotional aspects of life appear to have become more complex with new stresses from educational, cultural and socio-economic demands. All of these factors are inseparably interwoven with nutrition and metabolism as they affect the general well-being of the adolescent.

A great deal of publicity has been given to efforts to improve the physical prowess of our adolescents. Although such athletic programs are valuable in creating goals, they reach only a small portion of the total national resources of youth. As Hesse has so aptly characterized in figure 6, the fundamental issues involve coincidental increased efforts for better general medical care and adequate nutrition for all adolescents.[36] In this manner, we will not produce just "half a man," but hopefully will bring to fruition the mental and physical capabilities of the country's maturing boys and girls.

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# Nutrition in the Adult

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"NUTRITION IN THE ADULT," allows great latitude and temptation toward verbosity on the one hand, and an excuse to be limited in remarks because of the time restrictions, on the other hand. It is bad enough to try to define an "adult," since the government has one definition for voting and another for driving an automobile, the theater another arbitrary one and, in a more clinical vein, pediatric hospitals yet another; but to define nutrition is really a monumental task! In looking around for an adequate description, I have decided that my own, while hardly original, is as good as any, namely, that nutrition is that ecological science which deals with the role of ingested nutrients in body metabolic processes. This indeed places nutrition in an immensely strategic, yet highly diversified, position. It is for this reason that the nutritionist over the years has lacked autonomy and that so often, because of his special interests, will represent various disciplines which on the surface may appear incongruous, such as biochemistry, pharmacology, internal medicine, pediatrics, surgery, animal husbandry, agriculture, dietetics. But one must remember and appreciate that the human body derives all of its energy and many of its chemical constituents, which are involved in the complex reactions in the body called "metabolism," from food, and food alone. The body can not transfer other sources of energy, such as heat or sunlight or radiation, into active phosphate bonds any more than it can synthesize vitamin C. So the nutritionist, and through his investigations and teachings the modern physician, must comprehend biologic values, acceptability, absorption, transport, intermediary metabolism, storage and excretion of food products. Obviously not a simple chore for one nutrient, let alone the 50 odd ones of which we are aware today.

However, it behooves the medical student and the practicing physician to acquaint himself with the field, if for no other reason than to defend himself against his patient. In this day and age of *The Ladies' Home Journal, Time, Reader's Digest,* and Dr. Carlton Frederick, the public is kept informed in matters of nutrition; how well is another question! It is important to be able to discuss intelligently with patients the biologic value of foods, the importance of vitamin therapy, the saturated vs. unsaturated fat controversy, and to prevent them from the economic as well as medical pitfalls in food fads and diet quackery which are so prevalent today.

The science of nutrition is old, as old as medicine itself, since Hippocrates taught the value of food, and Galen in 164 A.D. authored several books about the role of diet in anatomy and health. However, much of this was clouded out during the scientifically sterile Dark Ages and it was not until the 16th century that men's minds again began to inquire into why they ate food. Santorio Sanctorius, in the late 1500's performed what was probably the first attempt at a "balance study" when he compared his weight before and after eating with the weight of the ingested food. It was not until some 300 years later that his experiments were understood—when men such as Voit, Rubner, Atwater and many others really launched modern nutrition as a scientific study, aided and abetted by the developments in physiology and chemistry.

During these "golden years" of nutrition in the late 1800's and early 1900's the major emphasis was upon undernutrition and inadequate diets. Essential factors were being discovered, enzyme systems uncovered, intermediary metabolism explored, minimal daily requirements established, all against the background of a "poorly nourished" population. Out of this emerged the concept of optimum nutrition through healthful eating habits and proper food, with backing from governmental agencies such as the Department of Agriculture and others. Thus, every school child was taught the value of milk, vegetables and fruit; each mother was impressed with the importance of a well-rounded diet; bread was "enriched" with vitamins; homogenized milk was developed so that more butterfat was sure to be ingested, and eggs were declared as the "perfect food."

In addition, the food-processing industry in an effort to "improve our way of life," hardened cooking oils for the housewife, promoted deep-fat frying and flooded the market with high calorie pre-prepared food items. Add to the above the economic growth of the country, with more money available with which to buy food, and one has the explanation as to why today undernutrition is a minor problem in the U. S. A. (President Kennedy's pre-election statement to the contrary notwithstanding), as compared to the problems of overnutrition. This is not to deny that throughout the world undernutrition remains the major problem. Still, obesity and atherosclerosis, those children of true malnutrition, are to me real and significant obstacles to our potential as a nation. One only has to read the daily newspaper to realize how many of our people at the prime of their contributing life in science, education or politics succumb to a complication of a disease which certainly has malnutritional factors in its genesis, namely, myocardial infarction. A better example cannot be cited than former President Eisenhower's close call during a time of great national peril.

It is estimated that 28 per cent of our middle-aged (30 to 60 years of age) population is obese, using the criterion of 15 per cent over and above the "desired weight" for the definition of obesity.[1]

These 28 per cent have a life expectancy significantly less than normal and in addition face a greater liability toward the morbidity and social and economic sequelae of diabetes, gallbladder disease, hypertension and atherosclerosis. Why should this be so, when everyone is so aware of the problem? What are the etiologic factors in simple obesity?

For years efforts have been made to uncover some organic or metabolic defect which could explain obesity. The basal metabolic rate has been studied carefully and found to be normal to increased in patients with excessive adiposity. A decrease in specific dynamic action of food, or that energy required in the assimilation of food, has been suggested as a possible cause, but this has not been found when measured. Likewise, such theories as increased absorptive capacity, positive water balance, endocrinopathies, heredity, hypoglycemia, have not withstood the scrutiny of scientific investigation. Thus the obvious concept, namely, that most obesity has overeating as its prime cause has been championed by most nutritionists. Although the third law of thermodynamics, which states in essence that energy taken in must equal energy expended, is as true today as ever, it should not be accepted as prima facie evidence that obesity is only a matter of gluttony. Although Newburg's experiment on the conservation of energy in obesity has withstood the assaults of time, and overeating must be the most important factor in its genesis in most cases, there exists the unalterable clinical opinion, backed by scattered pieces of scientific data, that simple and persistent overeating is not the sole problem. Thus Olsen and coworkers in Pittsburgh have demonstrated euphagy and hypophagy (that is normal to decreased food intake) in a group of obese women and conclude that energy expenditure must be less than normal in such a group.[1] Activity increments, that is, the amount of energy expended for each physical task, is difficult to measure so that what on the surface may appear as normal or average energy expenditure in reality may not be at all. Certainly everyone would agree that obese persons for the most part move slower and less often than normals. However, it can be argued that such findings do not explain the inception and development of obesity, but rather are the result of overweight.

Other metabolic studies in obesity which show decreased ketogenesis[2] and increased avidity to conserve nitrogen[3] further suggest some underlying metabolic derangement. This suffers from the same objection as the other—that the observations may be a result of rather than a cause of obesity.

One cannot discuss obesity without reference to the psychologic control of appetite. It is important to remember the difference between appetite and hunger, the latter being a physiologic response of the organism to an empty stomach, whereas the former is a sense predicated on previous happy memories. Both, of course, are mediated through the central nervous system, presumably in the hypothalamus with cortical control. In most individuals the homeostatic mechanism, the "appestat," which regulates food ingestion and requirements, functions adequately and a caloric balance exists. However, because of the higher cortical influence the appestat may be overwhelmed and hyperphagy lead to a positive caloric balance. That psychologic factors are important in obesity, no one can deny. Frequently such emotionally charged experiences as marriage, pregnancy, disease and death are trigger mechanisms precipitating overeating. I can imagine that at one time or another everyone has experienced uncontrollable appetite in response to a stressful situation. Psychiatrists tell us that oral gratification is a basic drive so that it is not difficult to understand the psychodynamics in many cases of obesity. It is important that the physician try to recognize and help the obese patient to cope with his problems or at least to understand them.

Regardless of the etiology, once obesity has developed, a successful negative caloric balance leading to weight loss can be achieved only through a restriction of dietary calories. I cannot stress this too much in these days of popular diet fads. I need not recite the oft repeated comparisons of relative caloric values for food vs. exercise, but suffice it to say that merely increasing energy expenditure is an inefficient way to lose weight. Exercise is important to maintain muscular and skin tone, but unless combined with a restricted caloric intake, will lead only to bigger muscles, more overeating from a better appetite, and overweight.

I cannot resist the temptation to say a few words about "liquid diets" in the therapy of obesity. At last count there are some 70 plus proprietary products on the market, sold in groceries, drug stores, dairies, "pony kegs" and the like. There is no question but that a 900 calorie diet will effect weight loss in the great majority of obese patients and that the formulae of most of these preparations include at least "minimum daily requirements" for the known nutrients. With these two facts I have no quarrel. What I do object to is the impression that such dietary substitutes are anything more than psychologic "gimmicks." A natural, well-balanced 900 calorie diet will produce exactly the same weight loss as the liquid alternative, will taste much better and will contain roughage and other natural substances which may have some importance in health and which are missing in a liquid diet. A more important side-effect arises from the fact that such products can be obtained without the guidance or counsel of a physician, a practice which has potential danger in certain cases. I think it is important that any substantial weight reduction program should always be carried out with a doctor's approval and under his direction. Another objection I have to these dietary alternatives is that, as my experience has indicated, when dieting becomes too easy for the patient, it is likewise too easy for him to relapse, and before long the patient is on an "adipose yo-yo."

The use of appetite depressors in the therapy of obesity is a complete topic in itself. The use of such agents is to be looked upon as a crutch which may be necessary depending on the extent of the problem. They are useful in certain instances, but have limitations because of the development of tolerance to their effects. The use of thyroid extract to increase the basal metabolic rate or diuretics to produce weight loss via water excretion are to be condemned.

Atherosclerosis is another important example of overeating, perhaps overeating of a specific type of nutrient. Although the importance of other factors in the genesis of vascular disease such as heredity, sex, stress, hypertension, are not denied, the importance of the diet cannot be minimized. There is a tremendous amount of experimental data from nutritional surveys in many countries of the world. Animal dietary experiments and human correlative and dietary manipulative studies convince even the most skeptical reader that the dietary intake of certain varieties of fatty acids have an effect on the serum lipids. These in turn have certain chemical and physical patterns which are significantly associated with varying incidences of atherosclerosis.[4]

A look at the alarmingly rapid increase in the vital statistical data relative to the incidence of ischemic heart disease as a cause of death in certain areas of the world will soon convince one that atherosclerosis is the major public health problem today. For example, in Britain during 1956 more than 45,000 men died of coronary artery disease, as compared to only 743 in 1921.[5] Similar figures are available for this country. True, this may reflect better diagnostic ability and longer survival, but certainly the difference can not be entirely explained by these means. In addition, if one studies the classic papers of Lober[6] concerning the severity of atherosclerosis of coronary vessels from birth to old age as well as the Armed Forces Institute of Pathology's report on Korean casualties,[7] it becomes abundantly evident that this is a disease of the young as well as the old and that there are important environmental factors in its incidence. The Korean material showed atheromas grossly visible in 50 per cent of the coronary arteries of young men, aged 22 years. In 10 per cent of these men, thanks to the "wonderful American diet" of milk shakes, eggs and French fries, at least one coronary artery had its lumen reduced by 50 per cent or more. Lober's beautiful data show that the greatest annual change in lipid content of the intima occurs in the first year of life (when the baby is consuming a high percentage of saturated fatty acids in its diet), but is also high between the years of 15 and 30. Thus it is apparent that atherosclerosis is not a disease to be limited to a geriatric practice, but rather a disease that is present in everyone, including present company, but which produces its lethal complications depending upon strategic localization as well as extent of the plaque formation. Therefore it behooves us all to give some serious thought as to what the medical profession is going to do about this.

Probably no subject has evoked as much recent publicity in both lay and professional circles as the role of diet in the genesis of atherosclerosis. As one might predict, some of the information is loaded with half-truths, emotionalism, facetiousness, and what I like to call "garbage." I would like to summarize what I believe to be the essential and relevant facts upon which a sound decision may be based.

It is both interesting and sobering to recall that in 1908, 53 years ago, Ignatovski of the Russian Military Medicine Academy, reported that rabbits fed milk and egg yolk developed severe arteriosclerosis.[8] Here was the key to the solution of an ever-increasingly important disease, yet only today is an attempt being made to apply these principles to the rational practice of medicine. There was some attempt to follow-up these leads, because Stucky in 1912 found that fish oil, meat and sunflower oil did not produce the arterial lesions, while egg yolk and brain were more effective even than milk.[9] Anichkov in 1913 focused attention on the importance of cholesterol, verified by Bailey[10] in this country in 1916, and although partially wrong concerning its importance in diet, still contributed what remains as an important denominator in the problem.

Undoubtedly the skepticism concerning the experimental studies revolved about the unwillingness to accept animal data and relate it to humans. However, as early as 1941, Snapper commented on the possible role of diet in explaining the differences in the incidence of vascular disease in Holland as compared to North China.[11] However, I believe the great impetus to today's interest came with the reports filtering out of Normandy during its military occupation by Germany in World War II and from Britain during rationing, of the marked decrease in atherosclerosis and its complications during these periods. Certainly socio-economic stress was great and one of the results was a decrease in the consumption of saturated fat. Soon thereafter the reports of dietary surveys by Keys and workers[12] throughout the world, as well as many other investigations, confirmed the earlier work of Ignatovski. At first it appeared that a high fat diet alone was associated with a high incidence of vascular disease and an elevated serum cholesterol. This latter finding, namely of a positive correlation between the height of the serum cholesterol and the incidence of atherosclerosis, is undeniable. I do not believe there should be any doubt but that a person with an elevated serum cholesterol has a much better chance of succumbing to vascular disease (usually a coronary) than a similar aged person with a low or normal cholesterol value. This is, of course, a statistical possibility—obviously a man with a 400 mg. per cent serum cholesterol may die in an auto accident or from carcinoma. Since there is no good method for studying the extent or even presence of atherosclerosis until a complication has occurred, the serum cholesterol provides an excellent parameter to follow.

As more experimental evidence accumulated, it became clear that the level of dietary fat could not explain all facts but, rather, that the type of dietary fat was perhaps as, or even more, important. Groens in Holland[13] and Kinsell in California[14] were the first to show that fats which contained a high percentage of unsaturated fatty acids were capable of lowering the serum cholesterol. Then followed many experiments which have irrefutably confirmed these findings.

Thus diets high in medium and long-chained saturated fatty acids support elevated serum cholesterols and relative increases in beta lipoproteins and Sf lipoproteins of the 10 to 200 class, whereas diets high in the polyunsaturated fatty acids lower these lipid components. Whether or not elevations in these serum lipids actually produce atherosclerosis or if so, by what mechanisms, is still unanswered. But certainly no one can deny their coexistence and much evidence supports a causal concept. Thus it would appear that diets rich in dairy products, heavily laden with "marbled" meat, deeply fried in hardened fat—a "nutritious" diet—must be altered to a less fatty one containing more foods exhibiting unsaturated fatty acids. One can not well alter heritage, sex, or even many of the stresses, but one can change eating habits, albeit difficult as it is.

Thus the pendulum has completed its arc! It has swung from the problems of undernutrition to those of overnutrition, and in its wake has come many important scientific by-products. Are we ready now to center it? Are we ready to recommend to our patients—to the population as a whole—that they alter their dietary patterns, or are we only going to reserve this information for those who have already suffered from the complications? The American Heart Association has gone on record as recommending gross changes in the diet toward an increased polyunsaturated fatty acid content. I believe it is time that nutritionists admit that the phenomenon of overcompensation has occurred, that whole milk was really made for cows, and not humans, that eggs were meant to produce more chickens, that 40 to 50 per cent of total calories by fat is not necessary, indeed dangerous, and that a well-fed nation is not necessarily synonymous with a properly-fed nation.

Lest I be misunderstood, I do not recommend complete ablation of the items mentioned. I would compare the situation to that in chronic alcoholism. The disease does not necessarily make the offender "verboten." When used with temperance it should be enjoyed. Food was made to enjoy as well as be required. However, eating should not be abused. Obesity and atherosclerosis are examples of abuses.

Consider for a moment animal experimentation. McKay[15] in the late thirties and early forties showed that calorically depleted rats lived longer than full fed litter mates. Hoelzel and Carlson[16] in the mid-forties performed some experiments on rats in which one group of animals were fed a rich diet containing 30 to 35 per cent meat protein and 28 per cent animal fat, and another fed a "relatively poor" diet consisting of one part rich diet and nine parts whole wheat flour. The first group grew fat and their fertility diminished. Successive generations demonstrated progressive physical deterioration and more sterility and after nine generations the group had died out. The rats on the "relatively poor" diet continued to propagate and thrive indefinitely. Although these experiments are sketchy and performed in animals, the obvious conclusion is that overeating even in animals is a dangerous avocation.

Obviously no one would suggest that undernutrition, whatever that is, is to be advocated. On the other hand, I am just as sure that the concept of a fat healthy baby or the well-ingrained concept of a "pleasingly plump" adult is not to be condoned. Physicians and nutritionists must by careful diplomacy extol the virtue of leanness, destroy the myth of excessive oral gratification as a socially acceptable habit and return to a sensible eating program.

Since so many of the good things to eat, that is, those foods which taste good and are enjoyed so much, are those which contain large numbers of calories and saturated fat, the next job is up to the dietitians, cooks and food processors to develop acceptable substitutes. This can and is being done in all areas. New margarines high in unsaturated fatty acids are available; skim milk is regularly sold by all dairies; low fat cheeses and low fat ice creams can be obtained in most stores; numerous cook books describing low fat cookery have been published. The possibility of our animal husbandry colleagues altering the fatty acid components of our animal foods by dietary manipulation in the animals themselves is on the horizon. The possibility of a tasty, well-accepted, yet prudent diet is nearer today than it has even been. For complete acceptance, however, persistent and carefully planned education of the population will be essential.

My comments, although encompassed under the subject of nutrition in the adult, and rightly so since obesity and atherosclerosis are diseases of adulthood, should not be interpreted as being restrictive to just one age group. Since atherosclerosis is said to have its greatest spurt in development during adolescence, what I have had to say about overeating certainly applies to all ages. There are many other problems in adult nutrition that might be discussed, but I am firmly convinced that over-nutrition is the most significant type of malnutrition that physicians face today.

I would like to close with my own interpretation of the famous nutritional problem extolled in the Mother Goose Rhyme, Jack Sprat.

Jack Sprat could eat no fat
His wife would eat no lean
So betwixt the two of them
They licked the platter clean.

The economics of this tale
Are clear to one and all
But what became of dear old Jack
His dame to what did she befall?

Tis said the wife ate more and more
Grew fatter bye and bye
Until her girth became so large
In bed she could no longer lie.

The blood pressure rose
The urine became sweet
Rocks in her gallbladder
Water in her feet.

Cyanosis, lethargy, alas, deep sleep
A woeful end without a peep.

What of Jack? He grew old

(Continued on page 343)

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# Geriatric Nutrition

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Nutrition of the aged is something more than the simple extrapolation of the nutrition of the younger individual. As in pediatrics, there is need in geriatrics to consider the unique biologic attributes of persons (preferably not yet patients) in a special age category. Although basic nutritional principles remain essentially unchanged, their proper application is contingent on an understanding of the physiologic—and psychologic—characteristics peculiar to this group.[1-3]

"Aging is the deterioration of a mature organism resulting from time-dependent, essentially irreversible changes in all members of a species, such that, with the passage of time, they become increasingly unable to cope with the stresses of the environment, thereby increasing the probability of death."[4] Shock's more succinct description provides predominantly structural inferences: "the progressive changes which take place in a cell, a tissue, an organ system, a total organism, or a group of organisms with passage of time."[5] The concept of Kinsell further emphasizes the physiologic aspects: "a decrease in the total number of cells and in the functional capacity as compared to the maximal number of cells and optimal functional capacity at some earlier period in the life of the individual."[6]

Accepting that old age is in some measure a matter of definition and of criteria, that chronologic and physiologic age are not synonymous, that there are marked inter- and intra-individual (organ system) differences in the aging process, that physiologic changes are not readily distinguishable from pathologic developments, and that preventive measures are preferable to symptomatic therapy, it may be assumed that, at some point in the natural life history of every individual so-called degenerative phenomena become manifest and (too often belatedly) demand medical attention.

Among the important characteristics commonly noted in the older individual is a reduced total metabolism, reflecting, besides decreased physical activity, a reduction in the total cell mass, as distinct from a reduction in protoplasmic oxidative processes, per se.[7] Usually there is a decrease in lean body mass with a relative (and, not infrequently, an absolute) increase in body fat.[8] The gastrointestinal system may show altered structure and function. Teeth are often absent, or inadequately replaced. Taste sensitivity declines. There may be a reduction in the quantity as well as the quality of the saliva, gastric and pancreatic juices and enteric secretions. Muscle atrophy conduces to impaired intestinal motility, and diverticuli of the colon further compromise bowel action. As inferred in part from altered blood levels of nutrients, intestinal absorption may be impaired, although this is inconstant and not necessarily applicable to all ingested substances.[9] Hepatic function is often reduced,[10] and may contribute to impaired protein as well as carbohydrate tolerance. Other organs, conspicuously in the cardio-respiratory, renal and nervous systems, also show diminished function,[11] contributing to the generally slower responses and reduced reserve to meet stressful situations (less effective homeostasis) that are characteristic of the older person.[12] Associated mental rigidity[13] and emotional lability reinforce the influence of lifelong habits, reducing receptivity to innovation.

Superimposed on these more usual deviations —the outcome of earlier adversities as well as of the more nebulous aging process itself—are the effects of the complicating disorders, which, successively or concurrently, are the all but inevitable accomplishments of senescence. Basic nutritional regimens must necessarily be modified in accordance with the more specific requirements of the principal, presenting problems, including conditions attributable to the unsalutary dietary practices of earlier decades—the so-called "nutritional scars."

In light of these considerations, the cardinal principles of the nutritional management of the older person should be these:[1-3, 9-11]

1. The diet should be individualized, in accordance with economic, ethnic and personal circumstances, literally a personalized prescrip-

tion which does not call for a sudden, drastic departure from existing patterns. It should be an integral part of a regimen that is consistent with the individual's philosophy and value system, including his goals.

2. The diet should be practical, compatible with everyday obligations and responsibilities. It should keep the individual functioning at optimum levels—at his usual work, if any—and not conduce to invalidism, real or imagined. Inappropriate or excessive devotion to diet above and beyond the call of duty can constitute yet another form of iatrogenic disability.

3. The diet should be flexible, emphasizing a system of exchanges, with provision for individual preferences. Well planned, varied meals should provide for maximum gestatory appeal. Idiosyncrasies should be respected, and caution should be exercised in recommending fruits, vegetables and, particularly, the fried foods that commonly cause distress.

4. The diet should utilize readily available, commonly consumed and generally acceptable—as distinct from unusual or esoteric—foods, which other members of the family can regularly share.

5. The diet should be consonant with established and accepted health practices, and should not be incompatible with regimens prescribed for specific medical conditions, such as cardiac or renal disorders.

6. The diet should be balanced and complete, in conformity with the recommended daily allowances of the National Research Council, which, it should be emphasized, are optimal, not minimal, "requirements," providing suitable margins of safety.

The caloric needs of the older person are commonly described as lower than those of younger individuals,[14] estimated ranges are 2,200 to 2,700 per day for males, and 1,800 to 2,000 for females. Basically, however, individual requirements remain a function of body proportions, composition and function, and may be calculated as approximately 25 calories per kilo of ideal weight,[10, 15-19] plus 20 to 30 per cent, depending on physical activity. Although protein needs are estimated at from 0.5 to 2.0 grams per kilo of ideal weight, an intake of 1.0 gram per kilo,[19] providing approximately 15 per cent of the total calories, usually represents a satisfactory "dynamic quota"—assuming at least two thirds from animal sources. Fat should contribute from 20 to 30 per cent of the total energy; 30 grams seem a practical mimimum consistent with protein and satiety needs. Emphasis should be placed on the predominantly unsaturated triglycerides, notably those of fish and vegetable origin. Carbohydrate to meet the remaining caloric requirements should be consumed chiefly as polysaccharides, with few of the rapidly absorbed, simple sugars that conduce to wide oscillations of the frequently labile blood glucose content. These sources should also provide the soft bulk essential to effective bowel action, without an excess of indigestible, irritating roughage.[10, 17-21]

An adequate liquid intake—at least 2 liters beyond that contributed by solid foods—should be advised to insure a urine output of 1.0 to 1.5 (preferably) liters per 24 hours.[10] Except where specifically indicated, salt restriction is not recommended, especially where this practice may jeopardize the intake of other essential substances. Provided all "basic seven" food components are consumed in appropriate amounts, special concern ordinarily is not directed to vitamin and mineral needs. However, a multivitamin supplement (0.5 to 2.0 times the NRC recommendations) is probably best prescribed to provide a "margin of safety" in an age group at special risk by reason of increased variability in requirements, reserves and utilization of these micronutrients. Iron requirements are usually met through the ingestion of liver once weekly, and, while evidence is particularly equivocal on this point, daily calcium needs would appear to be satisfied through the inclusion of one pint of

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## NUTRITION IN THE ADULT

*(Continued from page 341)*

So tall, so straight, so slim,
And when he died, an autopsy showed
Not a trace of atheroma within him.

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milk (preferably skimmed) or its equivalent.

The total daily food intake should be divided about equally among three (preferably, for practical reasons) or more meals, with or without between-meal feedings. Large meals should be avoided, especially in the evening. Each meal should be independently complete and balanced in respect to representative food components. Nutritional objectives also seem best served by adherence to a consistent, if not uniformly regular, meal-time schedule, which capitalizes most effectively on psychologic as well as physiologic rhythmicity. As far as possible, meals should be unhurried, friendly, family occasions, in pleasant surroundings conducive to a good intake and utilization of nutrients. Timely exploitation of the physician's rapport with the senior member of the family circle should also enable him to influence favorably the eating patterns of its younger (but, nonetheless, aging!) members.[1, 10]

One essential feature of a comprehensive nutrition regimen for the older person is regular, but not excessive exercise. Within appropriate limits, exercise—preferably pleasant, diverting activity at the same time of each day—should contribute to more efficient metabolic processes and to a general sense of well being, which, however intangible, is associated with a good appetite and an optimum employment of physical, mental and spiritual resources.[22]

Most important to the success of the nutritional—in fact, of the total, medical—management of the older person is the attitude of the physician, which, while conveying confidence and conviction, should be one of optimism tempered with realism. It must be concluded with Jahnke[23] that "the hope that diet or medicine may bring about the rejuvenation of the old will not be fulfilled. Once biological old age has been reached it is irreversible. The object of our endeavors, can, therefore, only be to slow down the aging process, to relieve deficiency conditions, and, by well considered measures, to facilitate recovery from illness."

Apparently, as Max Rubner has said so simply, "The whole secret of lengthening life consists of not shortening it."[22]

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*Research in the Service of Medicine*

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**SOLOMON GARB, M.D., *Columbia***

# Thermonuclear Survival

## *Family, Neighborhood and Community Shelters*

WITH THE DEVELOPING interest in thermonuclear survival greater attention is being paid to neighborhood and community shelters. It is important to distinguish between these two types. Although both are designed for a considerable number of occupants there are important distinctions between them. The community shelter is built or owned by some governmental agency, either federal, state, county or local. All citizens have a presumed equal right to take shelter in such community structures. In countries like Sweden, community shelters are built with a great degree of protection against blast and fire as well as fallout. In the United States, however, most community shelters consist of modified basements of large buildings. These give good protection against fallout but give virtually no protection against blast or fire. Although they are far from perfect, their use in emergency can save millions of lives.

The neighborhood shelter is a shelter designed for two to 200 families, built in a residential area and paid for by contributions from the families who will be sheltered therein.

A comprehensive nationwide shelter program must, of necessity include a variety of types of shelters to meet different community and family problems. Community sponsored shelters are necessary for those persons who live in trailers or apartment houses and to provide protection for persons who are away from their homes at the time of attack. In similar fashion, those families who live in relative isolation must rely on their own resources for protection and, here, the family shelter is the proper recourse. However, for the residential community, the neighborhood shelter offers advantages that cannot be matched by either a community or family shelter program.

The advantages of a neighborhood shelter may be discussed in the following categories: economy, protection and socio-psychologic aspects.

*1. Economy.*—By pooling construction expenses, it is estimated that the cost per family will be approximately one-half to three-fourths of that required for the individual family shelter of equivalent protective value. The area allotted per person in the neighborhood shelter can be made larger than that of a family unit and also obviate the crowding of large numbers of persons which would be necessary in a community shelter. The additional funds available in the neighborhood project might permit the construction of facilities which would add immeasurably to comfort, but would be prohibitively expensive in a family shelter. Such additions might include toilet facilities with septic tanks and the construction of a water supply from wells. With combined effort, the accumulation of proper equipment and supplies would be a considerably less expensive problem.

*2. Protection.*—In areas where construction costs are a limiting factor in building a shelter of adequate protective value, the neighborhood shelter may provide an opportunity for the contributions of each family to bring a return of higher protective value by pooling of such contributions. Funds which would be ordinarily directed to a number of minimal protection basement shelters might better be collected for the construction of an underground bunker which would provide some blast and fire protection and superior radiation protection.

**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine,* and are published with permission of that journal.**

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**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

Another contribution to the improved protection one can obtain in a neighborhood shelter is reduction of radiation to the individual as a result of combining efforts of many individuals. Over a period of time, it may be necessary to go outside the shelter for brief periods. With several families in a neighborhood shelter, this duty can be shared by several individuals without excessive dosage to one or two individuals as would be the case in a family unit.

3. *Socio-Psychologic Aspects.*—One of the commonest objections offered to the family shelter program is the question, "What do I do when my neighbors try to get into my shelter?" The neighborhood shelter is the obvious answer to the problem. Such a group is more apt to influence individual hold-outs in the shelter program in a given neighborhood and is more able to protect itself from vandalism and enemy activity, should troops be landed here.

The neighborhood shelter, while lacking the immediacy of the family shelter, still provides quickly accessible protection plus the psychologic assurance of its proximity.

The neighborhood shelter would obviate much of the loneliness of the family shelter. The fear of such confinement is a serious concern expressed by those who consider building a family shelter. The neighborhood program would permit exchange of ideas, recreational activities, playmates for children and, most importantly, the pooling of talents which would make survival during and after an attack more likely. For example, the presence in a neighborhood shelter of persons with training or talents in the fields of health, carpentry or mechanical aptitudes would make for added comfort and improve survival and reconstruction chances.

In the event that a neighborhood shelter is built it is advised that it be planned so as to provide shelter from blast and fire as well as from radiation. The added expense of doing this in a neighborhood shelter is small. Neighborhood shelters should not ordinarily be constructed in the basements of existing building although in a few cases there may be no other alternative. Whenever possible a neighborhood shelter should be built outside of existing buildings. There are three basic construction forms for neighborhood shelters. At this time the most expensive is a neighborhood shelter made of poured reinforced concrete. As pointed out in an earlier article these costs come from the relatively inefficient building practices used in making the forms. If reusable forms were available the costs would drop considerably; however, they are not now available. With present construction methods a neighborhood shelter made of poured reinforced concrete will cost between $200 and $700 per person. A second type of neighborhood shelter consists of 84 inch diameter, eight gauge steel pipe with appropriate entrances. When covered by at least five feet of earth a structure of this sort offers a great deal of protection. The protection factor against radiation is in the neighborhood of 50,000. Additional tests in actual bomb bursts have shown that these shelters can readily withstand blast pressures well over 100 p.s.i. In designing neighborhood shelters of this material it is advisable to allocate two linear feet per person. This comes to about 70 cubic feet per person. The cost of the steel in the main part of the shelter will be about $35 per linear foot or approximately $70 per person sheltered. In addition there are the other costs of providing entrance ways, end closures, ventilation and the cost of excavation. These will vary depending on the number of persons sheltered and on the terrain and local labor costs but should come to a total of between $100 and $150 for each person sheltered. This is much less than the cost of an ordinary fallout shelter when built by a contractor.

In some cases, pipe arch made of corrugated plates bolted together can be used. The corrugations of the plates are much deeper than those of ordinary riveted corrugated pipe. Therefore, plates are much stronger for a given gauge, and can be used over a wider span. They are practical for neighborhood and community shelters. Table 1 gives some information on selected sizes of plate pipe arch. Many other sizes are available.

A third type of neighborhood shelter is practical only in certain locations. If there are large areas of solid rock which can be burrowed into, it will be possible to build a neighborhood shelter at a low cost. In this case, however, at least twenty families would have to be sheltered in order to take advantage of the economy of this method. Well-trained miners can blast shelters into rock formations at a total cost of $30 to $100 per person sheltered.

The neighborhood shelter can provide protection against fire and firestorm. If it is in an area in which there are few combustible materials no special provisions need be made. However in the usual residential area, in which houses are fairly close together, it may be necessary to make some special provisions for survival in the case of firestorm. This can be handled as described in a subsequent chapter.

TABLE 1

PLATE PIPE ARCH FOR NEIGHBORHOOD AND COMMUNITY SHELTERS

| *Maximum Width* | *Maximum Height* | *Cross Sectional Area* | *Cost Per Linear Foot* | | *Linear Feet Needed Per Person* | *Cost Per Person (Main Pipe Only)* | |
|---|---|---|---|---|---|---|---|
| | | | *10 Ga.* | *8 Ga.* | | *10 Ga.* | *8 Ga.* |
| 10′ 11″ | 7′ 1″ | 61 sq. ft. | $50 | $56 | 1.2 | $60 | $67 |
| 11′ 10″ | 7′ 7″ | 71 sq. ft. | $55 | $63 | 1 | $55 | $63 |

None of this discussion is designed to minimize the importance of the individual family shelter. For some families who live in rural areas the family shelter is the only possible solution. In some neighborhoods where the people are particularly resistant to any suggestions that they provide for the survival of themselves and their descendants, the individual family fallout shelter may be the only choice for the prudent family. Nevertheless it appears that the neighborhood shelter will probably be the most important feature of a civil defense program.

# Put your low-back patient back on the payroll

*Soma relieves stiffness*
*–stops pain, too*

**YOUR CONCERN:** Rapid relief from pain for your patient. Get him back to his normal activity, fast!

**HOW SOMA HELPS:** Soma provides direct pain relief while it relaxes muscle spasm.

**YOUR RESULTS:** With pain relieved, stiffness gone, your patient is soon restored to full activity—often in days instead of weeks.

Kestler reports in controlled study: *Average time for restoring patients to full activity: with Soma, 11.5 days; without Soma, 41 days.* (*J.A.M.A. Vol. 172, No. 18, April 30, 1960.*)

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only in higher dosages. Soma is available in 350 mg. tablets. **USUAL DOSAGE: 1 TABLET Q.I.D.**

*The muscle relaxant with an independent pain-relieving action*

SOMA®

*(carisoprodol, Wallace)*

Wallace Laboratories, Cranbury, New Jersey

Donald M. Dowell, M.D.

# President's Message

This issue of Missouri Medicine was being printed just about the time the Annual Session was in progress. One of the duties of an incoming President at the Annual Session is the appointment of standing and special committees and many members will soon be receiving notices of their appointments to these committees.

Any member who attends the House of Delegates is cognizant of the importance of the work of this facet of the Association. Therefore, I want to urge the acceptance to membership on committees and stress to committee members the dependence of the Council and the House of Delegates upon the work carried out by the committees.

One committee, appointed by the Council rather than by the President, is one that deserves much credit for this issue of Missouri Medicine, the Committee on Publication. This is the second year of a special issue by the University of Missouri School of Medicine, and both the school and the committee are to be congratulated.

*Donald M. Dowell, M.D.*

# EDITORIAL

## THE REWARDS OF UNITY

Two years ago the statement was made in the University of Missouri issue of MISSOURI MEDICINE that "Perhaps of first and greatest importance is the need for a complete mutual understanding between the practicing profession within the state and their medical school. . . . Unless these principles are repeated and acted upon at every opportunity they are apt to be forgotten in the press of the solution of day to day problems." Today this statement stands in bold relief against the back light of tremendous progress which has been made in medical education in your medical school and the resultant potential increase in quality of medical care. This change is due in large part to the enthusiastic support of the members of the Missouri State Medical Association.

This year the applications for entrance to the University of Missouri School of Medicine nearly doubled while the majority of other schools experienced relatively little change. This increase in applications allowed the selection of a class each member of which is a fine young man and can be expected to be academically successful. In previous years, while the individuals selected were excellent candidates personally, in many instances it was known that statistically a significant portion would be unable to complete medical school for academic reasons thus reducing the number of possible graduates and the caliber of medical care in Missouri.

To allay apprehension, there can be no danger of over recruiting well qualified young men since those with high academic promise can find acceptance in any one of a number of the 87 functioning schools in the country in the event they should be unable to enter their own university. This will aid in the solution of the impending national shortage of physicians which is also our concern.

No small part of the increased number of applications has been due to the farsighted establishment of the Missouri State Medical Association Student Loan Foundation. The Internal Revenue Service has recently approved gifts to this foundation for tax deduction purposes and it is now underway as one of the finest recent activities in behalf of the public good. At one and the same time it gives evidence of the interest of organized medicine in the welfare of the individual student and the quality of the future profession, while equally testifying to the right of each person to the dignity of self-sufficiency. If the "American way" is to conquer over bureaucracy this is the way it will be done.

Future problems will lend themselves to similar cooperative efforts. If the largest number of students are to be taught with the smallest possible hospital (and resultant expense) selective referral and admission must be worked out on a mutually acceptable basis. There is a good reason to hope that a Veterans' Administration hospital can be located in Columbia as a significant adjunct to the teaching facilities. This will require your support. Preceptorship programs will require increased planning and effort both from the school and the practitioners of the state.

Based upon the great strides forward which have been recorded in the immediate past, we can look forward with proud anticipation to the future. Unity of purpose and effort will continue to produce the type of results which are currently earning the commendation and astonishment of our fellow physicians in other states.

VERNON E. WILSON, M.D., *Dean*
University of Missouri
School of Medicine

# Ramblings of the Field Secretary

### Greene County Has Installation

It was a big night. A fine turn-out of members of the Greene County Medical Society and their wives saw to that. The Annual Installation of Officers with "all the trimmings" was the occasion. This delightful affair took place at the Holiday Inn, Springfield, Wednesday night, January 31.

The head table included Dr. and Mrs. Summers, Dr. and Mrs. Ferguson and Dr. and Mrs. Peterson.

The festivities began with a social hour which served its intended purpose of developing the proper atmosphere for subsequent events comprising the evening's program.

Dr. L. Richard Webb Jr., the evening chairman, regretfully, I am sure, terminated the social hour activities by requesting all to be seated for the serving of a delicious steak dinner. With all present seemingly well fed, he began the formal program activities by introducing guests at the head table and others in the audience proper.

Dr. Peterson received the gavel from Dr. Ferguson.

The retiring president, Dr. John P. Ferguson, was next called upon to make what comments he deemed appropriate. His remarks related primarily to an expression of appreciation to the membership for the splendid cooperation he had received as president, and for the honor of serving in that capacity. He did remark, however, that he was not at all unhappy over relinquishing this position to his energetic successor, Dr. Stanley Peterson. He then turned over the gavel to Dr. Peterson and wished him well.

Not to be outdone in this matter, Dr. Peterson as his first official act, presented Dr. Ferguson with a plaque expressing the Society's appreciation for his constructive leadership as president. Dr. Peterson's remarks, to those assembled, centered principally upon a few of the knotty problems facing medicine and the value of membership cooperation in dealing with them. He emphasized his hope for the continued fine cooperation of members of the Greene County Medical Society in the Society's activities and promised his best efforts as President in 1962.

Some 225 persons attended.

The final event of the evening was dancing for all with music "just right."

Among the special guests present were: Dr. J. H. Summers, President, Missouri State Medical Association, and Mrs. Summers, Lebanon; and Dr. Doyle McCraw, Councilor 8th District, Missouri State Medical Association, and Mrs. McCraw, Bolivar.

Other officers of the Greene County Society for 1962 are: President-Elect, Dr. Harry D. Silsby; secretary, Dr. Francis M. Maple; treasurer, Dr. M. D. Bonebrake.

### Fifth Councilor District Meets

The Boone County Medical Society was privileged to serve as host to a meeting of the 5th Councilor District of the Missouri State Medical Association, Thursday night, February 1. Some 60 physicians from the area attended this interesting and informative session, held at the Daniel Boone Hotel in Columbia.

**Mr. Woolley of the A.M.A. addressed the meeting.**

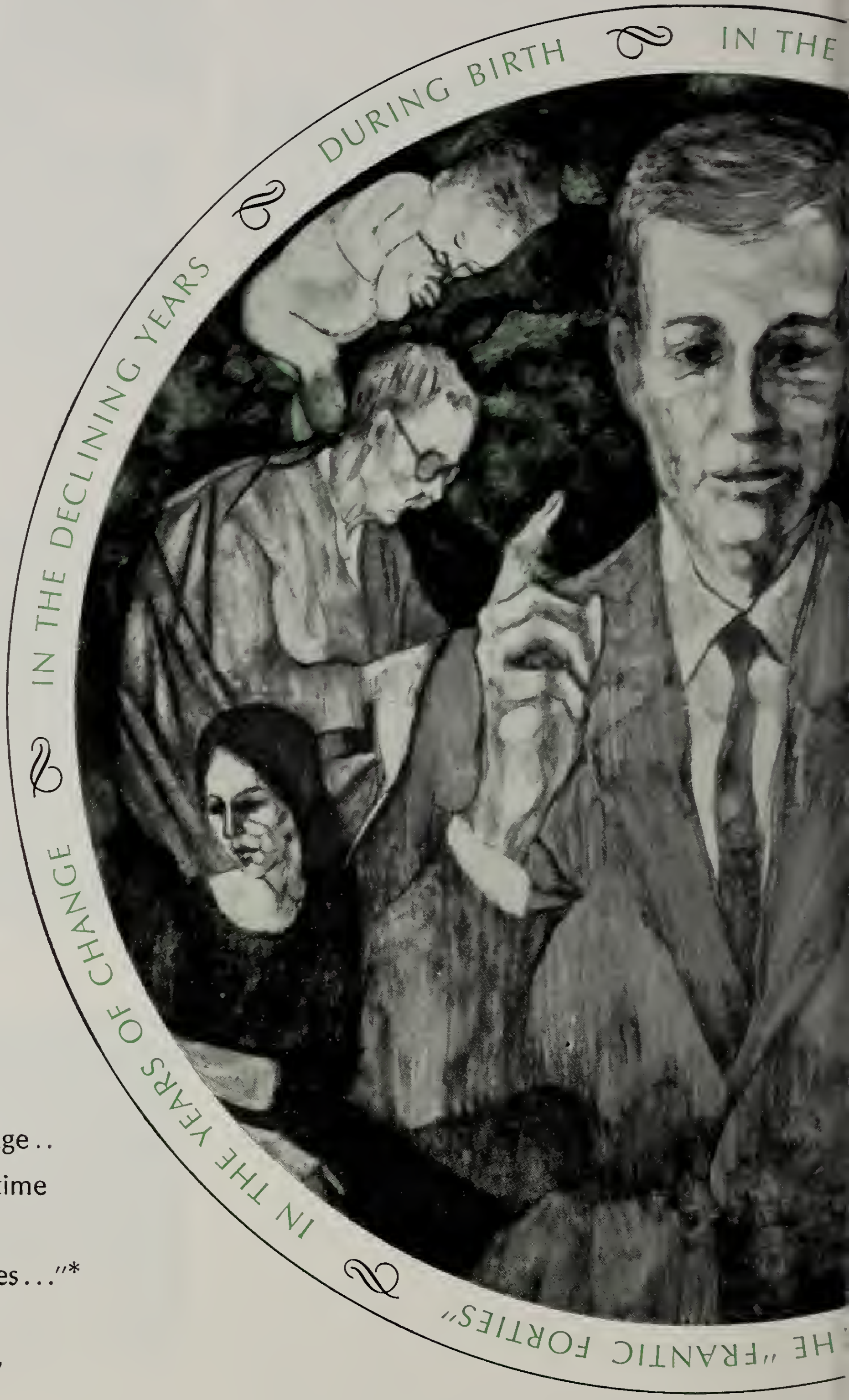
The evening program began with a social hour, followed by dinner and then formal talks by Mr. Frank Woolley, Chicago, and R. O. Muether, M.D., St. Louis.

Mr. Woolley, Field Representative of the A.M.A., discussed federal health legislation pending in Congress and pointed out ways and means for needed physician activity pertaining thereto.

Dr. Muether, President of the Missouri Medical Service, spoke on "Your Blue Shield Plan." He pointed out that difficult problems are now being encountered through demands from certain labor groups and their companies for a service contract from Blue Shield to replace their present indemnity contracts. Considerable discussion of this entire matter by numerous doctors present followed Dr. Muether's formal talk. It seems quite evident that here is an area in which much information is needed and sober thought given.

**Dr. Muether discussed Blue Shield.**

**The audience was attentive.**


DURING BIRTH
IN THE
IN THE DECLINING YEARS
IN THE YEARS OF CHANGE
HE "FRANTIC FORTIES"

"All the world's a stage..
And one man in his time
plays many parts,
His acts being seven ages..."*

*As You Like It*, Act II, Sc. 7

IN THE EMOTIONAL TEENS
IN PREGNANCY AND AF

through all seven ages of man

VISTARIL®

effective anxiety control
with a wide margin of safety

in the "frantic forties"—For many patients in their "frantic forties," the pace never slackens—may even accelerate—while tensions multiply and physical resources dwindle. Out of this seedbed of stresses and anxieties grow much of the alcoholism, psychosomatic illness, and sympathetic overactivity of the middle years.

In each of these areas, VISTARIL is often effective alone or as an adjunct to other therapy. For example, in his series of 67 patients, King[1] found that 62 showed remission of anxiety, tension, nervousness and insomnia, as well as alleviation of symptoms associated with various functional and psychophysiological disturbances. He concludes that VISTARIL is well suited for use in the practice of internal medicine.

In the emergent situation, VISTARIL, administered parenterally, is a valuable aid to the physician in managing patients who escape psychic conflict via alcohol. According to Weiner and Bockman,[2] who obtained beneficial results in 81% of 175 patients studied, hydroxyzine (VISTARIL) may well be considered a tranquilizer of choice in the management of the acutely agitated alcoholic.

1. King, J. C.: Int. Rec. Med. 172:669, 1959. 2. Weiner, L. J., and Bockman, A. A.: Sci. Exhibit, A.M.A., Ann. Meet., New York City, June 26-30, 1961.

VISTARIL® CAPSULES AND ORAL SUSPENSION
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VISTARIL® PARENTERAL SOLUTION
HYDROXYZINE HYDROCHLORIDE

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See "IN BRIEF" on the next page

IN BRIEF VISTARIL®

VISTARIL, hydroxyzine pamoate (oral) and hydroxyzine hydrochloride (parenteral solution), is a calming agent unrelated chemically to phenothiazine, reserpine, and meprobamate.

VISTARIL acts rapidly in the symptomatic treatment of a variety of neuroses and other emotional disturbances manifested by anxiety, apprehension, or fear—whether occurring alone or complicating a physical illness. The versatility of VISTARIL in clinical indications is matched by wide patient range and a complete complement of dosage forms. The calmative effect of VISTARIL does not usually impair discrimination. No toxicity has been reported with the use of VISTARIL at the recommended dosage, and it has a remarkable record of freedom from adverse reactions.

**INDICATIONS:** VISTARIL is effective in premenstrual tension, the menopausal syndrome, tension headaches, alcoholic agitation, dentistry, and as an adjunct to psychotherapy. It is recommended for the management of anxiety associated with organic disturbances, such as digestive disorders, asthma, and dermatoses. Pediatric behavior problems and the emotional illnesses of senility are also effectively treated with VISTARIL.

**ADMINISTRATION AND DOSAGE:** Dosage varies with the state and response of each patient, rather than with weight, and should be individualized for optimum results. The usual adult oral dose ranges from 25 mg. t.i.d. to 100 mg. q.i.d. Usual children's oral dose: under 6 years, 50 mg. daily in divided doses; over 6 years, 50-100 mg. daily in divided doses.

Parenteral dosage for adult psychiatric and emotional emergencies, including acute alcoholism: I.M.—50-100 mg. Stat., and q.4-6h., p.r.n. I.V.—50 mg. Stat., maintain with 25-50 mg. I.V. q.4-6h., p.r.n.

**SIDE EFFECTS:** Drowsiness may occur in some patients; if so, it is usually transitory, disappearing within a few days of continued therapy or upon reduction of dosage. Dryness of mouth may be encountered at higher doses.

**PRECAUTIONS:** Drowsiness may occur in some patients. The potentiating action of hydroxyzine should be taken into account when the drug is used in conjunction with central nervous system depressants. Do not exceed 1 cc. per minute I.V. Do not give over 100 mg. per dose I.V. Parenteral therapy is usually for 24-48 hours, except when, in the judgment of the physician, longer-term therapy by this route is desirable.

**SUPPLIED:** VISTARIL *Parenteral Solution* (hydroxyzine hydrochloride)—10 cc. vials, 25 mg. per cc. and 50 mg. per cc.; 2 cc. ampules, 50 mg. per cc. VISTARIL *Capsules* (hydroxyzine pamoate)—25, 50, and 100 mg. VISTARIL *Oral Suspension* (hydroxyzine pamoate)—25 mg. per 5 cc. teaspoonful.

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## NEW ACCIDENTAL DEATH COVERAGE AVAILABLE TO MEMBERS

The Council has approved a new Group Accidental Death and Dismemberment Insurance Program. This program is underwritten by the Insurance Company of North America and administered by Ed Gund, with R. B. Jones and Sons, Inc., Kansas City, Missouri.

This group program, available to members and their wives as well as their employees, has many outstanding advantages—

1. no age limit
2. coverage issued to all applicants regardless of past medical history
3. 24 hour coverage
4. annual rate of 90c per $1,000
5. covers any accident except war, suicide, piloting or acting as a crew member of an aircraft or while in military service.

All members and their employees may apply for coverage in amounts from $25,000 to $100,000. (Age 70 and over the maximum limit is $50,000.) Wives of members may apply for coverage in amounts from $12,500 to $50,000. An example of the annual premiums would be:

| *Amount of Coverage* | *Annual Premiums* |
|---|---|
| $ 25,000 | $22.50 |
| 50,000 | 45.00 |
| 100,000 | 90.00 |

If you have not taken advantage of this coverage, you may still do so by sending your completed application to the Group Administrator. Coverage will be effective the first of the month after the application is received.

For additional information write the Missouri State Medical Association office or Ed Gund, B. B. Jones and Sons Inc., 301 West 11th Street, Kansas City, Missouri.

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## WOMAN'S AUXILIARY

*(Continued from page 308)*

Justice Louis Brandeis once expressed his concern in these words, "Experience teaches us to be most on guard to protect liberty when the government's purposes are beneficent."

We all have a lot of ground work to do in our own communities during the coming months. Letter writing campaigns are under way in many counties. Let us be a little relentless on our own side of the fence. Read the *A.M.A. News* your husband receives (see that he brings it home to you), be informed on current pending legislation and tell your neighbors and friends the true facts. You owe it to your husband's profession. And you owe it to your Country.

*Diet patients welcome varied fare like this.*

# How to help your patient stick to a high protein diet

The secret ingredient in a successful diet is acceptance. And a diet that offers as many appetizing foods as this is sure to win the approval and continued interest of your patient!

A fluffy omelette filled with frankfurters cut into thin slices is a delicious source of protein, as are ground meat and fish. Cottage cheese makes a flavorful side dish or satisfying filling for dark bread sandwiches.

Hot weather suppers call for mixed green salad topped with meat and cheese slices . . . followed by a bowl piled high with chilled fruit of the season.

*A glass of beer can add zest to a patient's diet*

Protein, 0.8 gm;
Calories 104/8 oz. glass
(Average of American Beers)

United States Brewers Association, Inc.

For reprints of this and 11 other diet menus, write us at 535 Fifth Avenue, N.Y. 17, N.Y.

# News—Personal and Professional

"Treatment and Prevention of Home Accidents" was the subject of a talk by **G. Donald Shull**, M.D., Jefferson City, at the Thorpe Gordon Pre-School meeting in late January.

Guest speaker at the Hannibal High 12 Club earlier this year was **E. M. Lucke**, M.D., Hannibal.

Recently appointed medical director of St. Mary's Hospital, St. Louis, is **John A. Nuetzel**, M.D., Clayton.

The medical staff of St. Luke's Hospital, St. Louis, recently elected **Ray D. Williams**, M.D., Ladue, as president. **James Pennoyer**, M.D., Webster Groves, was elected vice president, and **John B. Shapleigh**, M.D., St. Louis, was elected secretary-treasurer.

The *Sun Gazette*-McCubbin Award was presented to **R. N. Crews**, M.D., Fulton, at the 57th annual Kingdom of Callaway Supper in February.

Speaker for the annual Cancer Control Month program of the Buchanan County Medical Society, to be held April 4 at Hotel Robidoux, St. Joseph, at 6:30 p.m. will be **Michael J. Brennan**, M.D., physician-in-charge of the Division of Oncology of the Henry Ford Hospital, Detroit.

The Columbia Chamber of Commerce at its February meeting heard a talk by **H. M. Hardwicke**, M.D., Ashland, on "The Challenge of Medicine in the Sixties."

The Kiwanis Club of Independence had as speaker at a late January meeting **Mark M. Marks**, M.D., Kansas City.

Tuberculosis and the Mantoux testing program were discussed by **E. H. Hamilton**, M.D., Joplin, at a meeting of the Jasper County Medical Secretaries and Assistants Club late in January.

The newly elected president of St. Joseph Hospital, Kansas City, is **Donald K. Piper**, M.D., Kansas City. **Leo F. Cooper**, M.D., was elected president-elect; **H. R. Lyddon**, M.D., secretary, and **William B. McCunniff**, M.D., treasurer.

Speaker at a Marvin Pre-School PTA meeting recently was **Roy A. Walther Jr.**, Overland.

The *Joplin Globe* carried a story concerning the professional and civic work of **Mary J. Newman**, M.D., Cassville, heading the story "Cassville's 'Dr. Mary.'"

Among those taking part in the program of the Southwestern Surgical Congress in Albuquerque, N. M., April 2 to 5, are **Gene B. Starkloff**, M.D., **Meredith J. Payne**, M.D., and **Eugene M. Bricker**, M.D., St. Louis; **D. L. Yancey**, M.D., Springfield, and **John A. Growdon**, M.D., Kansas City.

"Richard Bright—Traveler and Artist" will be the subject of a talk by **John F. Lowney**, M.D., Columbia, at a meeting of the Medical History Group of the University of Missouri, Columbia, on April 26.

## NEW MEMBERS

**Bernard A. Cruvant**, M.D., 529 Midvale Ave., St. Louis, has become a member of St. Louis County Medical Society. Dr. Cruvant is a native of Illinois, received his preliminary education at Washington University and his M.D. degree at Washington University in 1937.

**David F. Engelking**, M.D., 9507 East 63rd St., Raytown, has become a member of Jackson County Medical Society. Dr. Engelking is a native of Missouri, received his preliminary education at Cornell University, and his M.D. degree at Washington University in 1950.

**William L. Hauptmann**, M.D., 10695 Bellefontaine Road, St. Louis, has become a member of St. Louis County Medical Society. Dr. Hauptmann is a native of Illinois, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1951.

**Carl J. Marienfeld**, M.D., Medical Center, Columbia, has become a member of Boone County Medical Society. Dr. Marienfeld is a native of Illinois, received his preliminary education at Lake Forest College, and his M.D. degree at the University of Illinois in 1943.

## s each patient may require

—**for dramatic promptness:** Robaxin Injectable usually provides relaxation of painful spasm *in minutes.* Clinicians have reported that it is "effective in producing immediate relaxation,"[7] and brings about "dramatic relief of pain and spasm" within 15 to 20 minutes.[3]

In each 10-cc ampul Methocarbamol (Robins) 1.0 Gm.

—**for prolonged use with safety:** Robaxin Tablets safely maintain relief of spasm *without drowsiness.* "The effect does not wax and wane,"[4] and continued administration shows "no deleterious effect on normal muscle tone."[6]

In each white, scored tablet Methocarbamol (Robins) 0.5 Gm.

# ROBAXIN®

Robaxin is methocarbamol (Robins) U. S. Pat. No. 2770649

—**for concurrent analgesia:** Robaxisal Tablets, combining Robaxin with aspirin, are useful in spasm-triggering states that are painful in themselves, or when pain is prominently associated with muscle spasm.

In each pink-and-white laminated tablet Methocarbamol (Robins) 400 mg.
Acetylsalicylic acid (5 gr.) 325 mg.

—**for concurrent analgesia plus sedation:** Robaxisal-PH Tablets, combining Robaxin with the sedative-reinforced analgesic Phenaphen®, are particularly helpful in giving comprehensive relief to patients in whom muscle spasm is accompanied by spasm-potentiating pain and apprehension.

In each green-and-white laminated tablet
Methocarbamol (Robins) 400 mg.
Phenacetin 97 mg.
Acetylsalicylic acid (1¼ gr.) 81 mg.
Hyoscyamine sulfate 0.016 mg.
Phenobarbital (⅛ gr.) 8.1 mg.

# ROBAXISAL®

**References:** 1. Carpenter, E. B.: South. M. J. 51:627, 1958. 2. Hudgins, A. P.: Clin. Med. 8:243, 1961. 3. Lamphier, T. A.: J. Abdomin. Surg. 3:55, 1961. 4. Levine, I. M.: Med. Clin. N. America 45:1017, 1961. 5. Meyers, G. B., and Urbach, J. R.: Penna. M. J. 64:876, 1961. 6. Perchuk, E., Weinreb, M., and Aksu, A.: Angiology 12:102, 1961. 7. Poppen, J. L., and Flanagan, M. E.: J.A.M.A. 171:298, 1959. 8. Schaubel, H. J.: Orthopedics 1:274, 1959. 9. Steigmann, F.: Am. J. Nursing 61:49, 1961.

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## control the two-headed dragon of *pain & spasm*

### "HIGH THERAPEUTIC EFFECT"

A growing library of clinical reports on the use of Robaxin in painful skeletal muscle spasm continues to reaffirm its effectiveness, dependability, rapidity of action, and lack of significant side effects.

*Some recent comments:*

"...high therapeutic effect..."[5]

"...superior to other relaxants..."[9]

"...remarkably effective..."[2]

"...a high potential for prompt relief..."[8]

"...unusual freedom from toxicity..."[1]

**Monti C. Milligan,** M.D., Campbell, has become a member of Dunklin County Medical Society. Dr. Milligan is a native of Arkansas, received his preliminary education at the University of Arkansas, and his M.D. degree at the University of Tennessee in 1957.

**J. B. Peebles Jr.,** M.D., 135 W. Adams St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Peebles is a native of Tennessee, received his preliminary education at the University of Tennessee, and his M.D. degree at the University of Tennessee in 1933.

**Albert Roos,** M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Roos is a native of the Netherlands, received his preliminary education in the Netherlands, and his M.D. degree at the University of Groningen (Netherlands) in 1940.

**Daniel L. Rosenstein,** M.D., 216 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Rosenstein is a native of Oklahoma, received his preliminary education at the University of Oklahoma, and his M.D. degree at Washington University in 1954.

**Gustav A. Schupmann,** M.D., 819 Locust St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Schupmann is a native of South Dakota, received his preliminary education at St. Paul's Academy, and his M.D. degree at Loyola University in 1943.

**John T. Schwartz,** M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Schwartz is a native of Pennsylvania, received his preliminary education at Dartmouth and Notre Dame Universities, and his M.D. degree at Jefferson Medical College in 1955.

**Antonio R. Suba,** M.D., 601 S. Brentwood Blvd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Suba is a native of the Philippine Islands, received his preliminary education at the University of Santo Tomas (Manila), and his M.D. degree at the University of Santo Tomas in 1952.

**Harold D. Wolff,** M.D., 1420 Grattan St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Wolff is a native of Missouri, received his preliminary education at Washington University, and his M.D. degree at the University of Iowa in 1955.

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## DEATHS

**Nelson, Charles S.,** M.D., Westphalia, Kansas, a graduate of the University of Kansas, 1919; member of Jackson County Medical Society; aged 71; died January 18, 1962.

**Valentine, Herbert S.,** M.D., 1020 W. 67th St., Kansas City, a graduate of Kansas University, 1913; member of Jackson County Medical Society; aged 72; died January 20, 1962.

**Laning, J. Halcomb,** M.D., 27 Forest St., Stoneham, Mass., a graduate of the University of Virginia, 1899; member of Jackson County Medical Society; aged 93; died January 20, 1962.

**Doan, Deborah,** M.D., Trenton, a graduate of the University of Illinois, 1909; member of South Central Counties Medical Society; aged 74; died January 20, 1962.

**Stokes, Julius B.,** M.D., Excelsior Springs, a graduate of the University of Louisville, 1920; member of Ozarks County Medical Society; aged 70; died January 15, 1962.

**Black, Mervin H.,** M.D., Frisco Building, Joplin, a graduate of St. Louis University, 1926; member of Jasper County Medical Society; aged 68; died February 1, 1962.

**Douglass, Jesse E.,** M.D., 3560 Broadway, Kansas City, a graduate of the University of Minnesota, 1912; member of Jasper County Medical Society; aged 73; died February 1, 1962.

**Grosskreutz, Joseph A.,** M.D., St. James, a graduate of St. Louis College of Physicians and Surgeons, 1918; member of Mid-Missouri County Medical Society; aged 74; died February 6, 1962.

**Schmiemeier, Herman A.,** M.D., 6217 Delor St., St. Louis, a graduate of St. Louis School of Medicine, 1912; member of St. Louis Medical Society; aged 76; died February 8, 1962.

*Digestant needed?*

Cotazym-B provides the most potent pancreatic enzyme action available!

**Cotazym-B supplies**

**12** TIMES GREATER FAT-SPLITTING LIPASE (STEAPSIN) ACTIVITY THAN PANCREATIN N.F.[1]

**7** TIMES GREATER STARCH-DIGESTANT AMYLASE (AMYLOPSIN) ACTIVITY[2]

**5** TIMES GREATER PROTEIN-DIGESTANT PROTEINASE (TRYPSIN) ACTIVITY[2]

– PLUS BILE SALTS TO AID IN DIGESTION OF FAT, AND CELLULASE TO AID IN DIGESTION OF FIBROUS VEGETABLES

℞ Cotazym-B

COTAZYM-B is a new comprehensive digestant containing bile salts, cellulase and *lipancreatin* for supplementing deficient digestive secretions and helping to restore more normal digestive processes. *Lipancreatin* – "the most potent pancreatic extract available"[3] – is a concentrated pancreatic enzyme preparation developed by Organon.[4] It has been clinically proven to be an effective agent for treating digestive disorders of enzymatic origin.[1,4,5,6,7,8] COTAZYM-B is indicated for the symptomatic relief of dyspeptic or functional digestive disturbances characterized by bloating, belching, flatulence and upper abdominal discomfort.

*Dosage:* 1 or 2 tablets with water just before each meal.

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REFERENCES: 1. Best, E. B., Hightower, N. C., Jr., Williams, B. H., and Carobasi, R. J.: South. M.J. 53:1091, 1960. 2. Analytical Control Laboratories, Organon Inc. 3. Best, E. B., et al.: Symposium at West Orange, N. J., May 11, 1960. 4. Thompson, K. W., and Price, R. T.: Scientific Exhibit Section, A.M.A., Atlantic City, N. J., June 8-12, 1959. 5. Weinstein, J. J.: Discussion in Keifer, E. D., Am. J. Gastro. 35:353, 1961. 6. Ruffin, J. M., McBee, J. W., and Davis, T. D.: Chicago Medicine, Vol. 64, No. 2, June, 1961. 7. Berkowitz, D., and Silk, R.: Scientific Exhibit Section, A.M.A., New York, June 25-30, 1961. 8. Berkowitz, D., and Glassman, S.: N. Y. St. J. Med. 62:58, 1962.

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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Buchanan County Medical Society

Ninety-five doctors, wives and guests attended the February 7 meeting of the Buchanan County Medical Society in the Empire Room of Hotel Robidoux in St. Joseph. The Annual Heart Meeting sponsored by the American Heart Association and the St. Joseph Heart Council featured Ralph D. Alley, M.D., Albany, New York. Dr. Alley, a specialist in heart and thoracic surgery, discussed, "The Present Status of Heart Surgery —A Non-Partisan Appraisal."

The speaker gave a "tourist's eye view" of progress in heart surgery. He gave a history of heart surgery from the time of the first successful surgical correction of a heart defect in 1938. He reminded the audience that the heart is a fairly recent surgical field, and until recent years was "off limits" for operations. The lecture was illustrated with a comprehensive showing of slides of surgical procedures in correcting heart defects.

The speaker was introduced by the program chairman, Dr. Charles R. Willman. Dr. John R. Forgrave, president of the Society, presided.

Herbert C. Senne, M.D., *Secretary*

### Grand River Medical Society

The February 8 meeting of the Grand River Medical Society and Auxiliary, in the Chillicothe Strand Hotel, attracted 35 members and guests. Following a smorgasbord, the ladies convened for a separate program and listened to an interesting discussion of the Civil War by Sam Ross.

Robert Slickman, M.D., Kansas City, guest speaker for the clinical program, was introduced by Dr. Howard Carter, program chairman. Dr. Slickman's subject was "Diagnosis and Treatment of Infertility." He traced the complexities involved from the first time the couple with an infertility problem present themselves to the physician for help to the doorsteps of the orphanage. In many cases the latter may be avoided by careful diagnostic and treatment procedures. He stressed the importance of a detailed history, complete physical examinations and indicated the laboratory tests which should prove helpful. Surgical correction of male deficiencies was said to be more promising than surgery in the opposite sex.

At the business meeting, Dr. Smith moved that members be assessed to cover the expense of the hospitality room at the State Meeting in March. The motion was seconded and passed unanimously.

Guests present were: Dr. Robert Slickman of Kansas City, Mr. and Mrs. Bob Wheeler of Donnelson Drug Company and Mr. Sam Ross.

Frank R. Daley, M.D., *Secretary*

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## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### Chariton-Macon-Monroe-Randolph County Medical Society

Interesting and unusual cases were reported by members of the Chariton-Macon-Monroe-Randolph County Medical Society following its monthly dinner Thursday night, January 11, at Woodland Hospital in Moberly.

Cases were presented on rheumatic fever, leukemia, acute nephritis with an associated high blood pressure causing unconsciousness, and lateral sclerosis.

The surgical staff of the Woodland Hospital reported on four different types of unusual cases: (1) Nine cases of hernia of the diaphragm with so-called "upside down stomach" which have been successfully operated on by a new technic from Switzerland; (2) a partial resection of one kidney, saving the remainder of the kidney, which was not involved in the disease process; (3) a plastic operation of a joint of a finger with skin graft to the joint, restoring a stiff finger to useful function; and (4) relief of paralysis of a hand by removing pressure from a rupture of the joint at the elbow.

Delegates to the State Association meeting in March were urged to support an increase in Missouri State Medical Association dues, in which one half of the increase would go into a loan fund for Missouri students studying medicine who need money to complete their medical education. This will help provide more physicians.

Members present were: Drs. Avery P. Rowlette, C. C. Cohrs, W. D. Chute, S. R. Szymanski, J. Will Fleming Jr., Thos. S. Fleming, Josephine Baker, L. E. Huber and Robert Hasson, Moberly; Dr. P. V. Dreyer, Huntsville; Dr. F. L. Harms, Salisbury; Dr. D. D. Stuart, Brunswick; Drs. James E. Campbell and Donald Eggleston, Ma-

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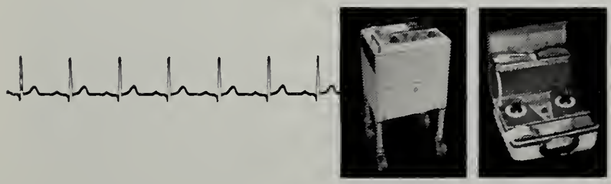

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con; and Dr. F. A. Barnett, Paris. Dr. Leopold Lachance of Centralia was a guest.

### MEETING OF FEBRUARY 8

The Chariton-Macon-Monroe-Randolph County Medical Society held its regular monthly dinner meeting Thursday night, February 8, at Woodland Hospital in Moberly.

The scientific program of the evening was presented by John T. Schwartz, M.D., Assistant Professor of ophthalmology at the University of Missouri Medical Center. His subject for discussion was "Office Treatment of Eye Disease." In this discussion he covered eye injuries, infections, glaucoma and cataract. He said that cataracts no longer need be held up for operation until they are "ripe" inasmuch as new technics have made the operation more successful at earlier stages.

In most cases the eye surgeon prefers postponing operation on the affected eye so long as there is adequate vision in the good eye. He pointed out that there are a number of excellent ointments available at present to use in case of eye infection.

Dr. John Irvine, a resident in ophthalmology at the University of Missouri, accompanied Dr. Schwartz. Members present were: Drs. W. D. Chute, Stanley R. Szymanski, C. C. Smith, L. E. Huber, Josephine Baker, R. H. Young, Robert Hasson, J. Will Fleming Jr., and Thomas S. Fleming, Moberly; Dr. P. V. Dreyer, Huntsville; Dr. F. A. Barnett, Paris; Dr. F. L. Harms, Salisbury; Dr. C. C. Weger, Keytesville; Drs. Gretchen Collins, Carl Rinker, Donald Eggleston and James Campbell, Macon.

J. WILL FLEMING, M.D., *Secretary*

### MARION-RALLS-SHELBY COUNTY MEDICAL SOCIETY

In spite of snow and "slippery underfoot" 15 people attended a dinner meeting of the Marion-Ralls-Shelby County Medical Society at the Moose Lodge in Hannibal, Tuesday night, February 20.

Mr. George H. Pace, State Representative of Marion County, was a guest. He discussed a proposed "Good Samaritan Bill" which is under consideration for introduction in the next session of the Missouri Legislature. The Society took no action on the proposal but laid the matter over for consideration at a subsequent meeting.

The scientific presentation of the evening was given by Frank X. Paletta, M.D., plastic surgeon from St. Louis. He discussed "Current Concepts in the Management of Cancer Involving the Face and Oral Cavity." An excellent set of slides was used to illustrate his discussion. The numerous questions raised by members of the audience throughout this presentation served as ample evidence of pronounced interest in the program.

Mr. Ray McIntyre, Field Secretary of the State Association, accompanied Dr. Paletta on his snowy visit.

WYETH HAMLIN, M.D., *Secretary*

## FOURTH DISTRICT

### PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### JEFFERSON COUNTY MEDICAL SOCIETY

The Jefferson County Medical Society met at Jefferson Memorial Hospital on January 23, 1962 with the following doctors present: Drs. R. H. Allbee, C. Fallet, T. Donnell, H. Donnell, J. Carron, C. Rice, B. Bolgar, H. Yoskit, E. J. Senn and F. L. Kozal.

After considerable discussion, it was agreed that the Society should be more active and attentive. To this end, the secretary was instructed to inaugurate a monthly program to be held the fourth Tuesday of each month. Many constructive program suggestions were made and noted.

Mr. William Vogt of Smith, Kline and French Laboratories presented their film, "External Cardiac Massage," as the program. This was enthusiastically viewed by those present.

The meeting was closed with the usual fine refreshments served by the hospital.

F. L. KOZAL, M.D., *Secretary*

## SIXTH DISTRICT

### O. B. BARGER, HARRISONVILLE, COUNCILOR

### LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

The February meeting of the Lafayette-Ray County Medical Society was held February 13, 1962 at Maib's Cafe in Lexington. The meeting consisted of a social hour, followed by dinner. The business meeting was called to order by the president, George Davault, M.D.

Ben Brasher, M.D., introduced the guest speakers for the evening, Maxwell Berry, M.D., and Sam Petrie, M.D., of Kansas City, Missouri. A film was shown explaining and demonstrating the method of external cardiac massage. Dr. Petrie presented a case study demonstrating the value of this procedure. Dr. Berry held an informal discussion concerning the equipment and training needed to carry out this valuable procedure. Members then discussed the possibility

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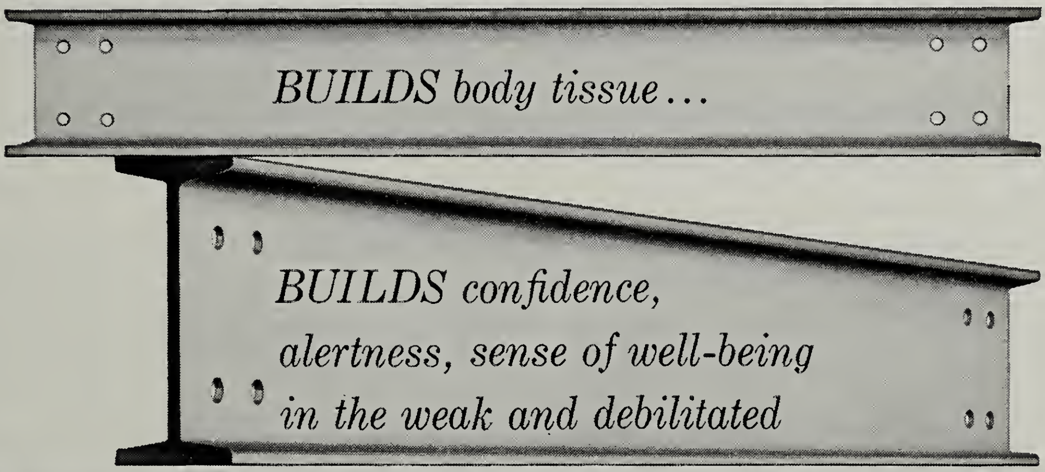
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of obtaining equipment and training personnel at the Lexington Memorial Hospital and the Ray County Hospital.

The meeting then adjourned.

Wayne Boydston, M.D., *Secretary*

### Saline County Medical Society

A dinner meeting of the Saline County Medical Society was held Tuesday night, February 6, at the John Fitzgibbon Hospital in Marshall.

The scientific program for the evening was presented by Thomas W. Burns, M.D., Associate Professor of Medicine at the University of Missouri Medical Center at Columbia. Dr. Burns spoke on "Recent Advances in the Management of Thyroid Diseases."

This was an interesting and informative discussion of a timely subject, and the Society is grateful to Dr. Burns for his well received presentation.

James E. Reid, M.D., *Secretary*

### West Central Missouri Medical Society

The February meeting of the West Central Missouri Medical Society was held February 8 at the Inn Hotel, Butler. The usual social hour preceded the evening meal.

Dr. Donald Giesler, president of the Society, introduced H. M. Hardwicke, M.D., Deputy Director of the Missouri Division of Health, Jefferson City, who spoke on "Current Challenges to Medical Practice." This was one of the finest talks that it has been our privilege to hear. Dr. Hardwicke, an excellent speaker, brought forth some worthwhile points in his discussion. This program is heartily recommended to every county society of the state.

A short business meeting followed the scientific program. Dr. Robert Magee, Eldorado Springs, chairman of the by-laws committee, made his report of suggested changes to be made.

Mr. Eason Pritchard, who has recently come to Bates County as the new administrator of the Bates County Memorial Hospital, was a guest. Dr. William Allen, a staff member of the Division of Health accompanied Dr. Hardwicke to Butler for the meeting.

Those in attendance were: Dr. and Mrs. Robert Magee, Eldorado Springs; Dr. and Mrs. H. A. Tracy, Belton; Dr. Edward Jones, Harrisonville; Dr. and Mrs. Don Giesler, Osceola; Dr. and Mrs. William Ellett, Appleton City; Dr. and Mrs. Gene Baska, Dr. and Mrs. C. W. Luter, Dr. C. A. Lusk Jr., Dr. A. L. Hansen, Butler. The small turnout for this program was regretted. The huge amount of work put upon the membership these past several weeks no doubt attributed to the small response at the meeting.

Let us all make every attempt to attend these meetings. A program committeeman's place is a hard job at best. When a good program is secured the committee is deserving of our response. It is embarrassing to secure a top notch program to be presented to a lot of empty chairs—they make a poor audience. The remainder of the year will be packed with good programs so let us all resolve to attend.

No further business being on hand, the meeting adjourned until the March meeting in Nevada at which time President Giesler has lined up an outstanding program.

Carter W. Luter, M.D., *Secretary*

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## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid-Missouri County Medical Society

Members of the Mid-Missouri Medical Society and their wives were invited to attend a meeting of the Fort Leonard Wood Clinical Society at the Officer's Club, Fort Leonard Wood, Tuesday night, January 30. The evening festivities began with a social hour followed by dinner and a program.

Ian Thompson, M.D., Department of Urology, and Donald Lindberg, M.D., Department of Pathology, University of Missouri Medical School at Columbia, spoke to the group on "pyelonephritis."

This program is acceptable for two hours of Category I Credit by the AAGP. Those present from the Mid-Missouri Medical Society were Dr. and Mrs. J. H. Summers and Dr. and Mrs. George E. Fisher, Lebanon; Dr. and Mrs. E. A. Stricker, St. James; and Dr. and Mrs. M. K. Underwood, Rolla. Members of the Society who were unable to attend this meeting missed an interesting and informative program plus an evening of pleasant sociability with our medical friends at the Fort and their wives. Fifty people attended.

M. K. Underwood, M.D., *Secretary*

# nutrition...present as a modifying or complicat- factor in nearly every illness or disease state”[1]

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

**diac diseases** “Who can say, for example, whether the patient chronically ith myocardial failure may not have a poorer myocardium because of a moderate iency in the vitamin B-complex? Something is known of the relationship of vitamin the intercellular ground substance and repair of tissues. One may speculate upon effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic ise.”[2] 2. Kampmeier, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

**hritis** “It is our practice to prescribe a multiple vitamin preparation to patients rheumatoid arthritis simply to insure nutritional adequacy . . .”[3]
andez-Herlihy, L: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

**gestive diseases** Symptoms attributable to B-vitamin deficiency are comly observed in patients on peptic ulcer diets.[4] Daily administration of therapeutic mins to patients with hepatitis and cirrhosis is recommended by the National earch Council.[5] 4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

**generative diseases** “Studies by Wexberg, Jolliffe and others have indid that many of the symptoms attributed in the past to senility or to cerebral arteriorosis seem to respond with remarkable speed to the administration of vitamins, ticularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of ng persons is lowered, even to the danger point, more than is the case in the average erican adult.”[6] 6. Overholser, W., and Fong, T.C.C. in Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

**fectious diseases** Infections cause a lowering of ascorbic acid levels in the sma; and the absorption of this vitamin is reduced in diarrheal states.[7] 7. Goldsmith, G A.: rence on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec.10) 1960.

**abetes** Diabetics, like all patients on restricted diets, require an extra source vitamins.[8] “Rigidly limiting the bread intake of the diabetic patient automatically minates a large amount of thiamin from the diet. . . . There is some evidence of erference with normal riboflavin utilization during catabolic episodes.”[9]
ncan G. G.: Diseases of Metabolism 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

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# From the Medical Schools

## WASHINGTON UNIVERSITY

### Gifts and Grants

A training program in developmental biology will be initiated at Washington University School of Medicine under a $125,629 grant from the U. S. Public Health Service. The grant will be administered by Dr. Jack Davies, professor of anatomy, and will include funds for the renovation of research and training facilities, an electron microscope and salaries for professional trainees. The training program will include aspects of biology which relate to the growth and maintenance of the embryo and fetus, the endocrinological aspects of pregnancy and studies of the placenta and development of embryonic structures with the electron microscope.

Other new grants totaling $53,450 were awarded to four scientists. Renewal research and training grants for eight projects totaled $217,863. Included in the new awards is a $27,007 grant to Dr. Falls B. Hershey, associate professor of clinical surgery, who will study changes in the skin caused by burns and metabolic changes in the skin during the healing of burns. Dr. William H. McAlister, instructor in radiology, was awarded $11,500 for studies of tumors in mice. Dr. Harvey R. Bernard, associate professor of surgery, will use a $9,193 grant for study of tissue absorption processes as they apply to diagnosis of surgical problems. Dr. Blake W. Moore, research assistant professor of biochemistry in psychiatry and neurology, was awarded $5,750 for study of proteins and enzymes in the brain. Dr. Moore is analyzing the proteins of the brain to determine if there are any alterations or deficiencies present in nervous diseases.

A gift of $125,000 has been received by Washington University School of Medicine from Mrs. Marguerite Abrons (formerly Mrs. Sidney R. Baer), Mr. Sidney R. Baer Jr., and Mr. S. Charles Baer. The gift will be used toward construction of a new building in the University Medical Center, which will be a memorial for Mr. Sidney R. Baer, who died in 1956. Mr. Baer was vice chairman of the Board of Stix, Baer & Fuller Company and a St. Louis civic leader. The new building will house the William Greenleaf Eliot Division of Child Psychiatry, now located at 369 North Taylor in the former Mission Free School.

### Faculty Activities

Dr. Fred C. Reynolds, professor of orthopedic surgery, was elected president of the American Board of Orthopedic Surgery at the last annual business meeting. His term of office will extend through January 1963.

Dr. Jack Strominger, professor of pharmacology and microbiology, has been awarded the Paul Lewis Laboratory Award in Enzyme Chemistry. The award was presented at a meeting of the American Chemical Society held in Washington, D. C., in March.

### Seminar Held

Washington University was the site of a seminar held by the American College of Physicians in February. Sixty-two physicians from 25 states and three Canadian provinces attended the postgraduate course on "Pathologic Physiology of the Blood Dyscrasias." Directors of the course were Dr. Carl V. Moore, Busch professor and head of the department of medicine; Dr. Edward H. Reinhard, professor of medicine, and Dr. William J. Harrington, associate professor of medicine and director of the division of hematology.

### Medical Society

Cancer research was the topic of the March meeting of the Washington University Medical Society. Dr. Edward Reinhard, professor of medicine, served as moderator. Dr. G. Rodman Davenport, of the Division of Cancer Research, spoke on recent studies on chemical carcinogenesis. Dr. William J. Harrington presented a report on studies on the role of immunology in leukemia. Assisting him on the research from the department of medicine were Dr. Mark Halloran, Victoria Kirchoff, Dr. Alberto Restrepo, and students, Richard Grossman, Bruce White, Allan Fishbein, Thomas Petersen, Sanford Werner, Daniel Pugh, Anthony Fathman and Robert Schiebe. ACTH secreting tumors were discussed by Dr. Martin Stein. Coauthors of the paper were Dr. Frank Riddick and Dr. David Kipnis, of the department of medicine. Dr. Eric Reiss

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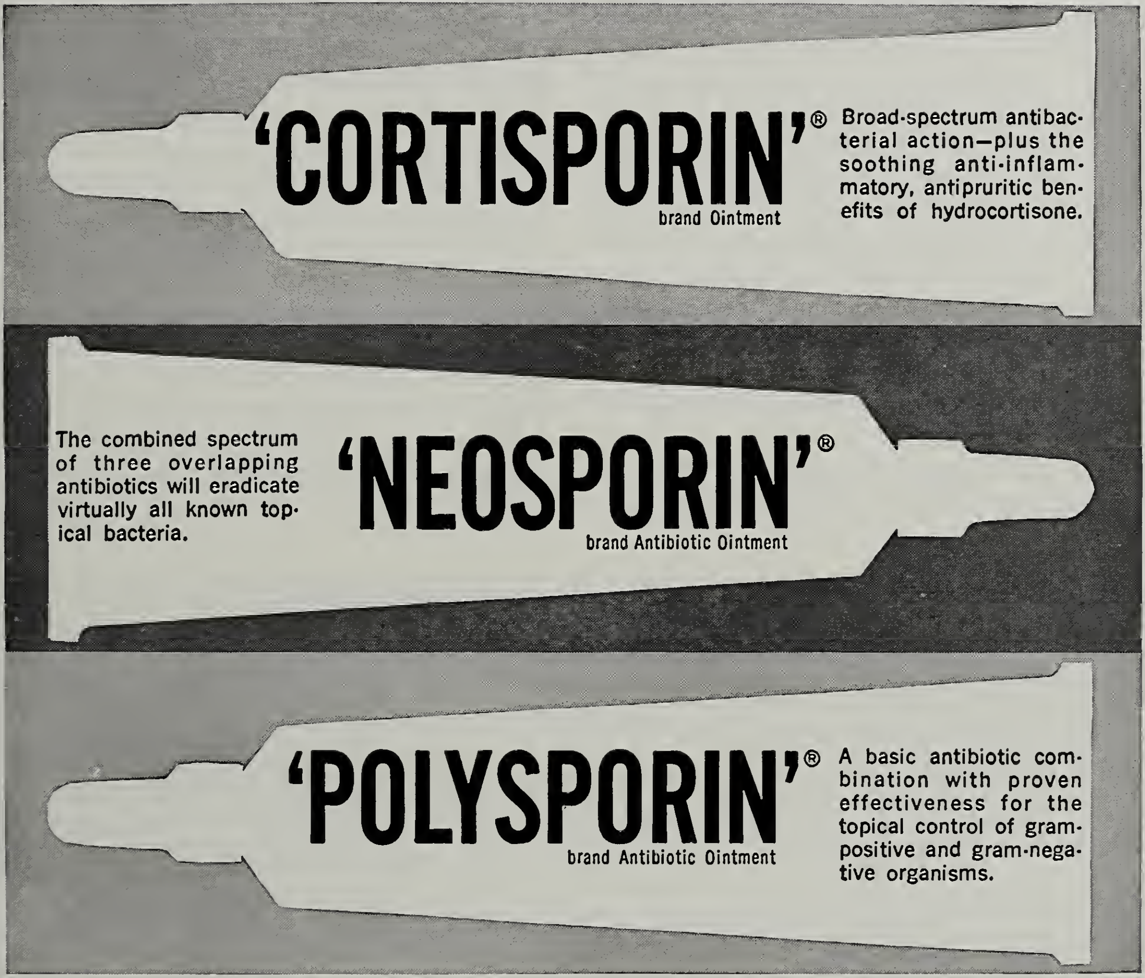

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spoke on hypercalcemia in malignant disease. He was assisted in the research by Dr. Robert Cutler.

The ultrastructure of the adrenal cortex of the dog during treatment with DDD was discussed by Neil Kaminsky, senior student at Washington University School of Medicine. Coauthors of the paper were Dr. Sarah Luse and Dr. Phyllis Hartroft, of the departments of anatomy and pathology.

## UNIVERSITY OF MISSOURI

### Meetings

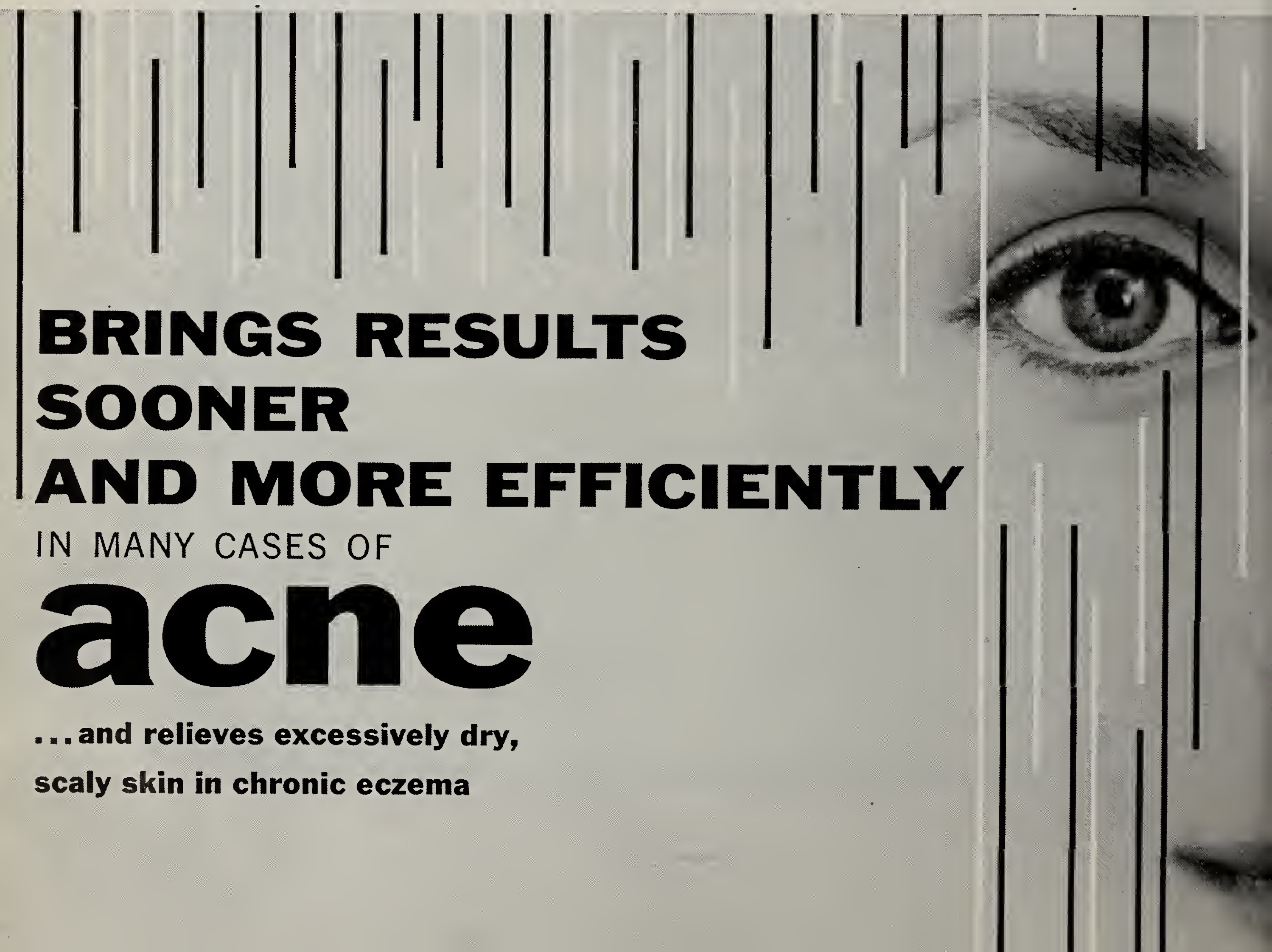
A postgraduate seminar on diseases of the bone was held at the University of Missouri Medical Center March 7 and 8. The seminar was presented by the University School of Medicine and the University Continuing Education Service, in cooperation with the Missouri Academy of General Practice. It was designed to bring before Missouri medical men recent developments in the field of bone diseases, discussed from the basis of pathologic physiology, anatomy and radiology.

The four guest faculty members were Ernest E. Aegerter, M.D., director of pathology, Temple University School of Medicine and Hospital, Philadelphia; John Caffey, M.D., emeritus professor of radiology, Columbia University School of Medicine, New York, who is also radiologist at Primary Children's Hospital, Salt Lake City, Utah; Edward B. Singleton, M.D., director of radiology, St. Luke's and Texas Children's Hospitals, Houston, and assistant professor of radiology, University of Texas School of Medicine; and Howard L. Steinbach, M.D., professor of radiology, University of California School of Medicine, San Francisco.

Lecturers from the University of Missouri medical faculty were Donald Q. Cochran, M.D., assistant professor of radiology; Theodore E. Keats, M.D., professor of radiology; and Gwilym S. Lodwick, M.D., professor and chairman of the department of radiology and associate dean of the School of Medicine.

Dr. Lodwick presided at the morning session March 7; Fred V. Lucas, M.D., professor and chairman of the department of pathology, in the afternoon March 7; Dr. Cochran the morning of March 8; and Dr. Keats the afternoon of March 8. Dean Vernon E. Wilson, M.D., of the School of Medicine, welcomed the seminar participants.

The eighth annual Missouri Regional Meet-



ing of the American College of Physicians was held on the University of Missouri campus February 24 in the Medical Center auditorium. Sessions were followed by a meeting of the Missouri Society of Internal Medicine at 5:00 p.m., and a social hour and dinner at 6:30 p.m. in the Daniel Boone Hotel.

Chester S. Keefer, M.D., director of the Boston University School of Medicine and immediate past president and regent of the American College of Physicians, was a guest speaker at a luncheon at the Memorial Student Union between the morning and afternoon sessions. Paul O. Hagemann, M.D., St. Louis, governor for Missouri of the American College of Physicians, presided at the luncheon.

Among the topics discussed in ten papers presented at the sessions were body radiation from treatment of hyperthyroidism, certain aspects of the electrocardiogram in chronic pulmonary disease, treatment of cardiac arrest and other medical problems of current interest. Also a panel discussion was held and eighteen papers on medical subjects were read by title. Participants in the panel discussion on the "Role of Enzymology in Clinical Medicine" were Thomas W. Burns, M.D., associate professor of medicine at the University, Sol Sherry, M.D., St. Louis, Robert Manning, M.D., Kansas City, and David Kipnis, M.D., St. Louis.

A Fluorescent Antibody Workshop was held at the University Medical Center on January 29 through February 2. It was presented by Dr. Elizabeth Wilson, Miss Jones and Miss Pittman of the Communicable Disease Center in Atlanta, Georgia, and was jointly sponsored by the Bureau of Laboratories of the State Division of Health and the Department of Microbiology at the School of Medicine through the cooperation of the Postgraduate Education Office of the School of Medicine. Laboratory space was provided by the Departments of Preventive Medicine and Obstetrics and Gynecology. Approximately 20 attended the lectures, discussions and demonstrations and 12 took part in the laboratory workshops. Representatives of laboratories in Springfield, St. Joseph, Kansas City, Jefferson City, Poplar Bluff and Columbia participated.

### Visitors

Visitors to the department of surgery included Hilario Anido, M.D., surgeon from Perry Point, Md., on January 26; George H. Vogt, M.D., orthopedic surgeon from Madison, Wis., Febru-

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ary 1 and 2; Reginald R. Cooper, M.D., orthopedic surgeon from Pensacola, Fla., on February 5; and Hal G. Bingham, M.D., plastic surgeon from Coralville, Iowa, on February 12 and 13.

### Traineeships and Fellowships

A list of seven traineeships or fellowships in the School of Medicine has been announced by Vernon E. Wilson, M.D., dean of the School and director of the Medical Center.

The traineeships and fellowships announced are among a number held by staff members of the School of Medicine, and were awarded to support the recipients in advanced training in their special fields as a means of improving their status as medical educators and researchers. The awards came from various grants made to the School of Medicine for such traineeships and fellowships.

Ernest E. McCoy, M.D., assistant professor of pediatrics at the school, is recipient of a $6,000 fellowship from a John and Mary R. Markle Foundation grant to the school. The fellowship is for the period from July 1, 1961, to June 30, 1962. The Markle Foundation grants are designed to help the best "scholars in medical science," in teaching and research training.

Arthur W. Merrick, Ph.D., associate professor of physiology, is now on sabbatical leave from the University while studying in the field of neurophysiology at the University of Colorado Medical Center, with the support of a $4,600 fellowship from a Wyeth Laboratories grant.

Leland R. Kugelgen, M.D., is taking advanced training in cardiovascular disease here under a fellowship in the department of medicine which carries a stipend of $4,500 plus $500 for each of three dependents. The fellowship was awarded from a U. S. Public Health Service grant to the School of Medicine for fellowships for training young medical educators in studies of the heart.

Leovigildo Cokingtin, M.D., instructor in pediatrics, holds a traineeship of $5,500 in pediatrics under a National Institutes of Health diabetes training grant to the school to train pediatricians for teaching positions.

An advanced traineeship in pediatrics with an $8,000 stipend from the National Institutes of Health diabetes training grant is held by James Milton Pickens, M.D., instructor in pediatrics.

Victor M. Carnes, M.D., assistant instructor in pathology, has a Clinical Cancer Trainee Fellowship of $5,800 from a National Cancer Institute grant to the Medical School. Michael J. Anigian, M.D., assistant instructor and first year resident in medicine, holds a diabetic training fellowship of $6,000 in the department of medicine under a Public Health Service diabetic training grant to the University.

### Trips and Talks

Dr. James A. Green, associate professor of anatomy, visited Dr. Manuel Maqueo, Chief of Pathology, of Maternity Hospital No. 1 in Mexico, January 30 to February 5, in Mexico City. Dr. Green and Dr. Maqueo are carrying on a joint light and electron microscope study of the normal human ovary throughout the menstrual cycle. The purpose of this trip was to continue the planning and to bring back research materials. Dr. Green also attended a symposium sponsored by Syntex on a progesterone derivative and its clinical usage.

Dr. Frank B. Engley Jr., professor and chairman of the department of microbiology, attended an NIH meeting in San Francisco, February 5. The meeting of program directors was held for discussing microbiology training grants. The directors were from the university microbiology departments having training grants.

Dr. Herbert S. Goldberg, professor of microbiology, gave a seminar talk to an inter-departmental seminar on "Polypeptide Antibiotics" at the Medical Center here February 13.

Dr. Donald P. Durand, assistant professor of microbiology, gave a talk on "Viruses in Opposition" in a seminar with the members of the department of bacteriology of Kansas State University, Manhattan, Kan., February 15. While there he also lectured a graduate class on "Viral Interference."

Dr. David G. Hall, assistant professor and chairman of the department of obstetrics and gynecology, attended a meeting of the Kansas City Gynecological Society January 29 in Kansas City.

Dr. James M. A. Weiss, professor and chairman, department of psychiatry, David Davis, M.B., associate professor of psychiatry, and Margaret Perry, M.S.N., head nurse on the psychiatry inpatient service attended a symposium on "Man and Civilization: Control of the Mind," at the University of California School of Medicine in San Francisco, January 26 to 29. The symposium included discussions of drugs, clinical implication of mood, individual potentialities, conformity and diversity, creative expression, and the relationship of the individual and community. Participants included a large number of international authorities.

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Dr. Theodore E. Keats, professor of radiology, was recently a guest of the department of radiology of Vanderbilt University School of Medicine in Nashville, Tenn. Dr. Donald Q. Cochran, assistant professor of radiology, was recently guest speaker of the Camdenton, Missouri Rotary Club. He gave a 45 minute talk on the history and current uses of radioactive isotopes in the field of medicine.

Dr. Per Odman, radiologist from the University of Chicago, was recently a guest of the department of radiology here. During his visit, he lectured on "Selective Renal Angiography."

Dr. Charles R. Simmons has joined the resident staff of the department of radiology. He is a graduate of the College of Medical Evangelists School of Medicine in Los Angeles, and was in private practice before joining our staff.

Drs. Donald Cochran, Paul Wheeler, assistant instructor, Kenneth Rall, assistant instructor, Cosmo Haun, assistant instructor, Virgil Condon, assistant instructor, Kenneth Dolan, assistant instructor, Jay Armstrong, assistant instructor, and Harold Wilkins, assistant instructor, attended a postgraduate course on "Radiology and Radioactive Isotopes" conducted by the University of Kansas Medical Center, February 19 to 21.

Drs. Lodwick, Haun, Roy Keller, director of the Computer Research Center, and Mrs. Walton Smith attended the Scientific Session of the Heart Association of Southeastern Pennsylvania relating to the application of computers in cardiovascular disease in Philadelphia, February 26 and 27.

In early February, Dr. Lodwick attended the Medical Education for National Defense Coordinators Conference in Chicago. Dr. Lodwick is MEND Coordinator for the University of Missouri School of Medicine. From Chicago he went to New York to attend the meeting of the American Registry of X-Ray Technicians in his capacity as Trustee of the Registry. Dr. Lodwick represented the Council of the American College of Radiology as Councilor for the Missouri Radiological Society.

Dr. John J. Modlin, professor and chairman of the department of surgery, and Dr. Carl H. Almond, assistant professor of surgery, attended the annual Society of University Surgeons meeting in Cleveland, Ohio, February 8 to 10. The faculty of Western Reserve Medical School were hosts for the 23rd annual meeting. Highlights of the program included a tour of the School of Medicine with presentation of current surgical research by members of the Western Reserve Department of Surgery.

Dr. Hugh E. Stephenson Jr., professor of surgery, spoke at Houston, Mo., to the South Central Counties Medical Society on "Closed Chest Versus Open Chest Cardiac Resuscitation (Indications and Contraindications)." The meeting was held February 13.

Dr. Samuel P. W. Black, professor of surgery (neurosurgery) and Dr. Warren P. Sights, assistant professor of neurosurgery, attended the meeting of the American Academy of General Practice, January 25. The topic of discussion was neurologic complications following emergency treatment of injuries of the extremities.

Dr. John C. Schuder, associate professor of surgery (biophysics) spoke on "Electromagnetic Energy Transport Through the Chest Wall at the Power Level Required for an Artificial Heart," to the physics staff and graduate students of the department of physics at the University February 14. The discussion of this topic was of research being done in the surgery department under the direction of Dr. Schuder, Dr. Hugh Stephenson, and Dr. Harry Stoeckle, associate professor of pediatrics.

Dr. John A. Buesseler, professor of surgery (ophthalmology), attended the Fifth Interim Congress Pan American Association of Ophthalmology, held in Lima, Peru, from January 28 to February 3. Dr. John T. Schwartz, assistant professor of surgery (ophthalmology), spoke to the Chariton, Macon, Monroe and Randolph County Society at the Woodland Hospital in Moberly on "Office Management of Eye Diseases" in Moberly, February 8. At the monthly staff meeting of the St. Joseph State Hospital No. 2, Dr. Schwartz discussed the Lions Eye Tissue Bank of the University of Missouri, with specific emphasis to technics of eye removal, February 13.

Dr. Ian M. Thompson, professor of surgery (urology), attended the Mexican Urological Association Meeting at the University of Guadalajara, Mexico, accompanied by Dr. John H. Landor, assistant professor of surgery. Dr. Thompson gave a talk on "Urologic and Surgical Aspects of Urinary Diversion" and also showed a movie entitled "A New Technique for Supravesical Diversion." Dr. Landor talked on "Complications of the Ileal Conduit Procedure." The meeting was held January 27. Dr. Thompson also spoke on urinary diversion at the Fort Leonard Wood Clinical Society Meeting at the Fort, January 30.

Dr. Laszlo Kovacsi visited the Wisconsin University Medical School, January 18 to 25. Dr. Charles Casteel attended the New York University Postgraduate Medical Seminar in New York City February 7 to 12.

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## MISSOURI'S DEANS

*(Continued from page 306)*

one half million dollars to medical schools through the Foundation since it was created.

In addition to seeking funds for medical schools, AMA-ERF encourages financial support from physicians, constituent and component medical societies, the Woman's Auxiliary, philanthropic organizations, business entities and the general public for a variety of programs including:

—Medical journalism fellowship project

—Research grants program for medical research workers

—Perinatal mortality and morbidity study

—Study of continuing medical education.

During 1962, the Foundation will undertake to raise funds to assist in the financing of medical scholarships and for loans for medical students, as well as to physicians in internships and residencies.

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# Missouri Medicine in Review

## FORTY YEARS AGO

Dr. E. C. Ernst, St. Louis, was elected president of the American Roentgen Ray Society, Central Section, at the meeting held in Chicago, February 22.

St. John's Hospital, Joplin, has announced that Dr. A. L. Korn has been employed as pathologist. Dr. Korn will give part time to the hospital.

Dr. Hubert Work, President of the American Medical Association, has been appointed Postmaster-General, succeeding Dr. Will H. Hays. Doctor Work has been first assistant postmaster during the present administration.

Dr. M. P. Ravenel, of Columbia, has been appointed one of a committee representing the American Public Health Association to cooperate with the organizers and directors of the proposed Gorgas Memorial Institute to be located in Panama.

The members of the St. Louis Medical Society are seriously agitating a movement for erecting a new building. There is a strong sentiment in favor of some plan to provide better facilities for the meetings of the Society and for the library.

Dr. F. G. Nifong was elected chief of the visiting staff of the Boone County Hospital, Dr. J. E. Thornton, vice chairman of staff, and Dr. J. E. Jordan, secretary of staff, by the Boone County

---

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| Vitamin B-2 | 1.2 mg. |
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satisfactory results in 88% of cases

**comments:** "In practically every instance... the patients experienced relief from dryness and pruritus."

STUDY 2 *Lubowe, I. I.: Western Med. 1:45, 1960.*

satisfactory results in 94% of cases

**comments:** Sardo "reduced inflammation, itching, irritation, and other discomfort..."

STUDY 3 *Weissberg, G.: Clin. Med. 7:1161, 1960.*

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- nummular dermatitis
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- soap dermatitis
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Medical Society recently to care for clinical patients in the hospital.

## TWENTY-FIVE YEARS AGO

The St. Louis Medical Society will celebrate its hundredth anniversary on April 5, 6, and 7 with sessions at the St. Louis Medical Society Building. Dr. Curtis H. Lohr, St. Louis, president of the Society, will open the session.

The Homer G. Phillips Hospital for Negroes, the Municipal City Hospital No. 2 in St. Louis, began operation March 1. Honorable Harold L. Ickes, Secretary of the Interior, stated in his dedicatory address on February 22 that the hospital was "the largest and finest of its sort in the world."

Dr. Alexis F. Hartmann, St. Louis, was recently appointed Professor of Pediatrics in Washington University School of Medicine and physician-in-chief to St. Louis Children's Hospital to succeed the late Dr. W. McKim Marriott.

Dr. John R. Caulk, St. Louis, was elected vice president of the American Association of Clinical Genito-Urinary Surgeons at the annual meeting of the association held in Chicago on January 22 and 23.

Dr. Floyd H. Spencer, St. Joseph, has been appointed a member of the St. Joseph Board of Health to fill the unexpired term of the late Dr. H. S. Forgrave.

Four members of the St. Louis Medical College class of 1881 met for an annual dinner at the Missouri Athletic Club, St. Louis, on March 3. Members attending were Drs. James A. Dickson, Willis Hall, Amand Ravold and Max C. Startloff, St. Louis, Drs. William A. James, Chester, Illinois, and A. S. Gregg, Fayetteville, Arkansas, were unable to attend. Dr. Joseph Grindon, St. Louis, of the class of 1879, the oldest living graduate of the school, was a guest at the dinner.

## TEN YEARS AGO

Drs. Leo J. Hartnett, Robert J. Crossen, A. N. Arneson and Willard M. Allen, St. Louis; Buford G. Hamilton, Jefferson City, and Hugh G. Hamilton, Kansas City, will appear on the program of the fifth American Congress on Obstetrics and Gynecology which will meet March 31 through April 4 in Cincinnati.

The Missouri Academy of General Practice will hold its Fourth Annual Assembly at the Governor Hotel, Jefferson City, May 7 and 8, 1952.

Stanley S. Peterson, M.D., Springfield, was awarded the Missouri State Junior Chamber of Commerce Distinguished Service Award at a meeting of the organization in Kansas City on February 2.

Eugene M. Bricker, M.D., St. Louis, became president of the Society of University Surgeons at a recent meeting of the society.

# Curiosa et Trivia

WILLIAM B. McCUNNIFF

Studies indicate that a near moron may be the best auto driver! Since driving his car is the most demanding process, he obeys the rules explicitly, and does a better job of watching signals, watching cars, and shifting gears.

---

Now they're quantitatively superior: females outnumber males in the largest cities in the U. S. In 1950, they were about equal; and 'way back in 1940, males outnumbered the females.

---

In case you're interested, blood cholesterol and eosinophil levels rise while you're dreaming. Getting stuck right in the middle of a dream certainly wouldn't tend to lower the levels!

---

Unplanned poisoning by gases takes a toll of over eleven hundred lives a year in this country. Three out of four of the victims are males, and most occur in or around the home. The most common source is motor vehicle exhaust, with utility gas second.

# Capsule Clinics

- No differences attributable to geographic origin or microscopic constituents were noted in the allergenicity of house dust. Prince, et al., Ann. Allergy **19**:1389, 1961.

- The serum level of griseofulvin can be doubled by administration with a high fat meal. Crounsem, R. G., J. Invest. Dermatol. **37**:529, 1961.

- Early castration seems to reduce the risk of breast cancer, an observation which prevents interesting academic, if not practical, aspects. Hirayama, T., and Wynder, E. L., Cancer **15**:28, 1962

- The majority of patients subjected to transurethral resection show asymptomatic elevation in serum glutamic oxalacetic transaminase during the first postoperative day. Robinett, D. E., Ohio State M. J. **58**:169, 1962.

From Clinical Clippings, the Francis Roberts Agency, Inc.

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# WASHINGTON

## Status Report on H. R. 10

H. R. 10 was introduced in the House of Representatives on January 3, 1961, in substantially the same form in which it was reported in the 86th Congress. The major amendment was the elimination of the provisions relating to corporate owner-managers. The bill was reported by the Ways and Means Committee on May 9, 1961, with only technical amendments. It passed the House on June 5, 1961.

As it passed the House, the bill provided for a deduction of up to 10 per cent of earnings from self-employment or $2,500, whichever is less, provided the self-employed individual established a nondiscriminatory retirement plan for his employees. If he had four or more employees, the benefits attributable to them would have to vest at the time the contribution in their behalf was made.

After two days of hearings in July, the Senate Finance Committee reported a completely new bill on September 13. In many respects the new language has the same effect as the House-passed version.

The major differences are that, while the self-employed individual who owns more than 10 per cent of the business may set aside up to 10 per cent of his earned income (as opposed to earnings from self-employment), he would be allowed a deduction of 100 per cent of the first $1,000 set aside and 50 per cent of the amount up to $2,500 (maximum deduction $1,750), provided that if he has employees he establishes a nondiscriminatory plan under which all employees with three or more years of service will benefit. Contributions in behalf of the employees must vest in them at the time the contribution is made. However, if there are no self-employed individuals who own more than 10 per cent of the business, the $2,500 limitation and the vesting requirement would not apply.

No further action was taken on the bill by the Senate before it adjourned on September 27.

The prospects in the second session of the 87th Congress would appear to be good. The Republican leadership supports the bill and many Democrats, including the Chairman of the Senate Finance Committee, Senator Harry Byrd, have endorsed its provisions. The fact that 1962 is an election year, that the bill passed the House by more than a two thirds majority, and that anticipated revenue loss has been reduced from an estimated $358 million to $200 million would seem to indicate the bill will escape presidential veto even though the Administration opposed the bill before the Senate Finance Committee.

## Lobby Spending

A recent compilation of amounts spent on lobbying was released by the American Medical Association, prepared by a legislative attorney in Washington. It shows that labor unions spent more than $1 million for lobbying purposes in 1961, with AFL-CIO unions alone reporting a total of almost $707,000.

In comparison, the American Medical Association spent $163,404 last year.

The parent AFL-CIO organization led the spending of its affiliates with a reported total of $133,919. But there were AFL-CIO affiliates which also spent considerable sums for lobbying purposes. These included: Farmers Educational and Co-operative Union of America (AFL-CIO), $88,272; United Federation of Postal Clerks (AFL-CIO), $73,867; and the International Association of Machinists, District Lodge No. 44 (AFL-CIO), $71,736.

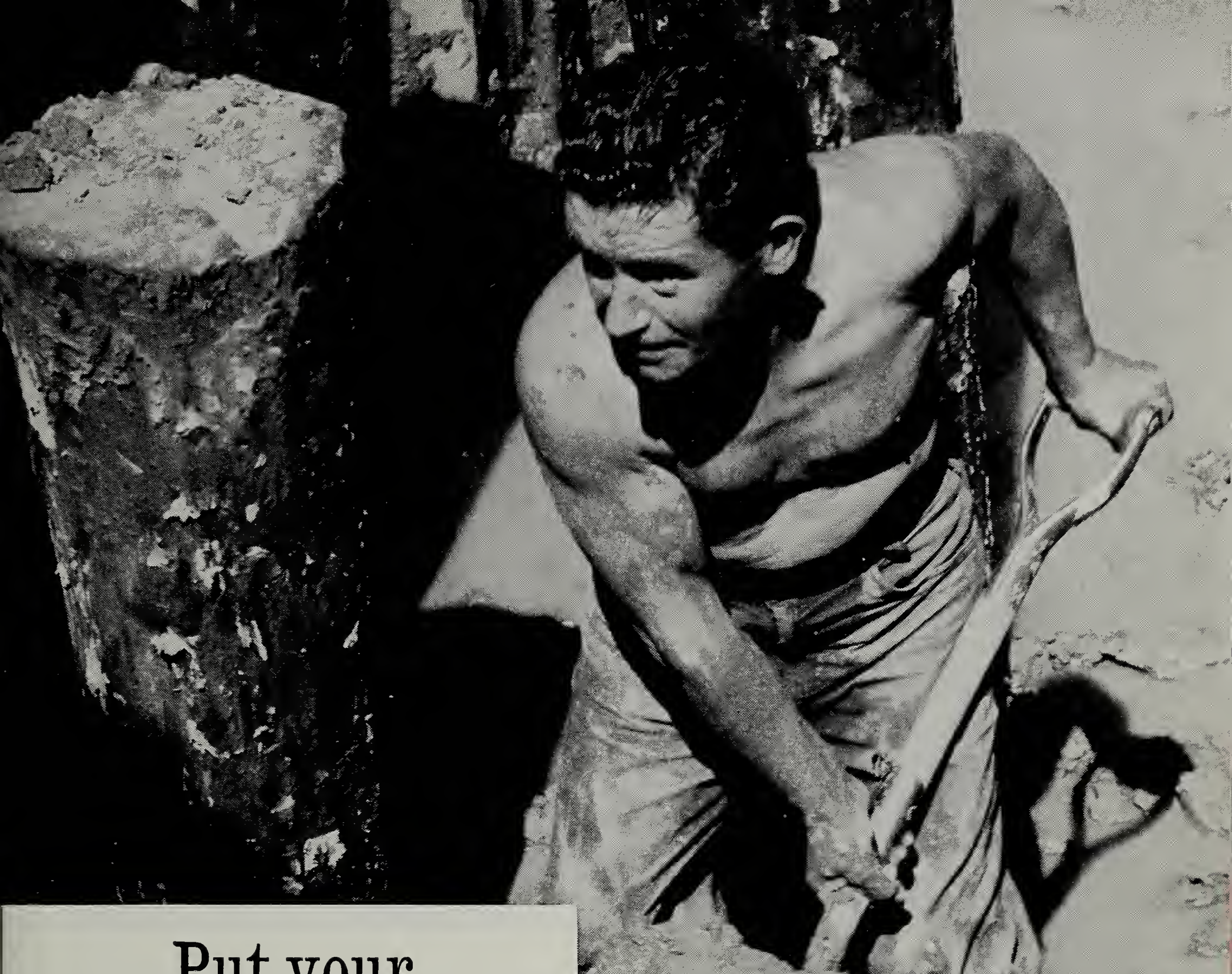
In the figure of labor's million dollar lobbying is not included the expenses of registered lobbyists for 17 unions. This group includes such huge unions as the United Automobile, Aircraft and Agricultural Implement Workers (AFL-CIO); United Steelworkers of America (AFL-CIO), and the United Mine Workers of America (Independent).

## PCHCATSS

A group of 27 have formed the Physicians Committee for Health Care for the Aged Through Social Security. All are M.D.'s and all but 10 of the 27 are professional educators. Their headquarters are in the Group Health Association of America office in Washington.

## May 20 Rally

On May 20 the President will address a rally of aged citizens at Madison Square Garden in New York, and through closed circuit television groups in 22 other cities. The rally is being arranged by the National Council of Senior Citizens for Health Care Through Social Security.



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*The muscle relaxant with an independent pain-relieving action*

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### Social Planning at Its Worst

An article some time ago in a national publication pro King-Anderson and such type practice of medicine drew many editorial comments, for and against. One such editorial comment appeared in *The Daily Dunklin Democrat* and is felt worthy of passing on, and is done so with permission.

"One of the nation's far-left-leaning magazines this week published a thoughtful dissertation on the surging need for a socialized medical program throughout America. As the reader waded through a maze of facts, considered opinions and attacks against the American Medical Association, it was almost possible to visualize the Utopia which the liberals had graphically pictured.

"We had almost signed to join the New Republic's crusade when we noticed a small and rather insignificant sentence toward the end of the article which read:

" 'Throughout almost every community, large or small, in the U. S. can be found doctors, most of them members of the AMA, who are living examples of the need for socialized medicine, in its broadest form.'

"We were nearly through the sentence, nodding our head in complete agreement, when we began to grasp for a few examples in Kennett and Dunklin County.

"Try as hard as we could, we couldn't come up with any examples by the time we had finished the sentence and started on another. And so we went back to the sentence and read it again.

" 'Throughout almost every community, large or small, in the U. S. can be found doctors, most of them members of the AMA, who are living examples of the need for socialized medicine, in its broadest form.'

"The declaration took in the entire nation, including Kennett and Dunklin County, and as we paused we silently ran through the roster of the Dunklin County Medical Society.

"Are our doctors in Dunklin County really examples of the need for socialized medicine we asked.

"Is Dr. Paul Baldwin, as one example, the first winner of *The Daily Democrat's* annual Citizen-of-the-Year Award, proof that socialized medicine is needed in Kennett? Although this personal reference will embarrass him, Paul Baldwin, who has been serving the medical needs of this community for more than 55 years, is one of the reasons why socialized medicine is not needed in Kennett. And what about Chester Peck, George Dunmire, Loys Wilson, Joe Zimmerman, Paul Miltenberger, Bob Palenski, Leo Benson, Quinton Tarver, Jack Cash—and all the rest? Are they the 'living examples' the liberals have pointed to? Yet all of these men are dedicated to the relief of human suffering, have proved themselves worthy of public trust, and have demonstrated time after time their dedication to the cause of humanity.

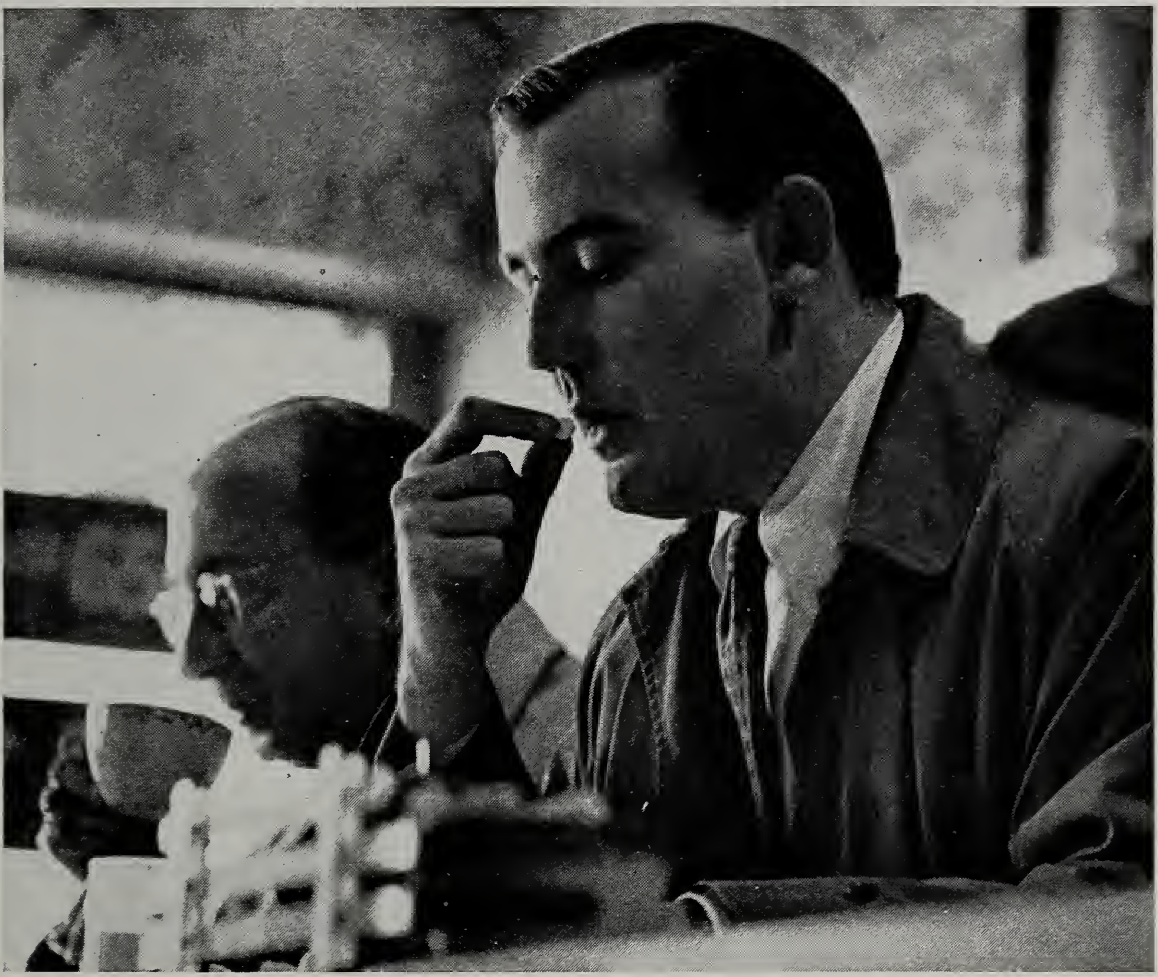
"No, we thought, these men aren't examples at all for the cause of socialized medicine.

"Perhaps the author of the argument had reference to the Kansas City physician who arrived at a suburban home after the patient died. 'Yes, your father is dead, but you still owe me for the house call' the young doctor told a shocked daughter.

"One rotten apple doesn't make a barrel and one money-hungry callous doctor doesn't make the AMA an organization of lecherous pill-pushers. One rotten apple doesn't mean the nation needs to socialize the welding industry, the legal profession or the supermarket industry.

"The terrifically-successful emotional appeal of the desperate need for additional medical and hospital care, and the higher-than-formerly costs of these services, have been the principal arguments for regimenting the medical profession in the U. S. What industry or profession is safe from this argument? Newspapers formerly sold for a penny—now a majority of them sell for a dime. Does this mean that the higher cost of newspapers has deprived the U. S. of education and news and therefore socialization is the next step? Food costs today are higher than five years ago. Americans are starving and thousands of

*(Continued on page 402)*



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*Schwartz, I. R.:
*Current Therap. Res.* 3:29, Feb., 1961.

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C. G. STAUFFACHER, M.D., Secretary

# Missouri Academy of General Practice

The month of May finds two chapters of the MAGP holding attractive one-day clinical symposiums. These will be held on the same day, Sunday, May 20. The Southeast Missouri Chapter, Dr. John T. Crowe, Cape Girardeau, program chairman, will present the following program at the Colonial Restaurant, Cape Girardeau, beginning at 10:00 a.m.: John Modlin, M.D., Columbia, "Lifesaving Measures for the Severely Injured Patient"; John D. Leidholt, M.D., Denver, Colorado, "The Acute Cervical Sprain"; Matthew Block, M.D., Denver, Colorado, "Anemia—The Age-Old Dilemma"; Paul Williamson, M.D., Bellaire, Texas, "Endocervicitis." At the close of the formal talks the speakers will appear on a question and answer panel, moderated by Dr. Edward Campbell of Cape Girardeau. The speaker for the luncheon, wives also invited, will be George Constant, M.D., Victoria, Texas. A special program for the day has been arranged for the doctors' wives. Financial and other assistance for the symposium is given by Lederle Laboratories. This medical and surgical symposium is acceptable for five hours of Category I Credit by the AAGP.

The St. Louis Academy Spring Scientific Symposium will be held at the Chase Hotel, St. Louis, also on Sunday, May 20. This is usually held earlier in May but conflicts established the later date this year. An interesting program is scheduled beginning at 1:30 p.m. and continuing through the afternoon. It is acceptable for four hours of Category I Credit by the AAGP. Following a social hour from 6:00 to 7:00 p.m., dinner will be served and a program presented by Mrs. Jeanette Elliott of St. Louis. Her subject will be "The Mad-Hatter," and does she have the hats! The St. Louis Academy program, in part, is made possible by a grant from The Wampole Laboratories. The program follows: "Medical Considerations in Water Sports," T. R. Struhl, M.D., Miami, Fla.; "Office Treatment of Injuries and Minor Surgery," A. L. Lichtman, M.D., New York; "Puzzling Types of Abdominal Pain," Walter C. Alvarez, M.D.; "Stress and the Use of Steroids," Marc Cantin, M.D., Montreal, Canada. Chairman of the Program Committee is Dr. Delevan Calkins.

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## ACROSS MISSOURI

*(Continued from page 400)*

them die of malnutrition each year. Does this mean that at some future date there will be just cause for socialization of the retail and wholesale food industry?

"Where does the argument end? Where do the examples stop?

"Sure, let's recognize the fact that there are problems in this nation with regard to proper medical and hospital care for all citizens. But would the advocates of socialized medicine care to take a look at the stack of unpaid bills which doctors in Kennett have no hope of collecting and would they wish to assume the payment of these bills? We doubt it. There is no group in Kennett which has a larger ledger of unpaid accounts receivable than the doctors. When you talk to them about socialized medicine, some will tell you they know what you mean—they've been privately financing a program for years.

"Medical care costs can be solved through expanded medical research, innovations in hospital care and treatment, and sufficient doctors to treat an expanding population.

"Socialization is not a curative, it is a cancer. Try it once and it spreads. Socialize medicine and watch the remainder of the trades, professions and industries become targets for the social planners.

"And what first appeared to be a great humanitarian program turns into a polyglot of bureaucracy, inefficiency and loss of initiative.

"The social planners never seem to get around to mentioning this."

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1. Ford, R. A., and Blanchard, K: Journal-Lancet 78:185, 1958.

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arthritis — and osteoporosis
arthritis — and hypertension
arthritis — and hyperglycemia
arthritis — and cardiac insufficiency

# Woman's Auxiliary

The comings and goings; the joyous greetings and reminiscences so characteristic of old friends meeting; the sound of the gavel rapping for order—these have all become a pleasant nostalgic haze in these last few weeks.

I hope you will all pardon me as I swell with a little justified pride when I thank the members of my own home Auxiliary for such a happy Convention. After seeing these girls in action I am sure you can all understand why I will do everything humanly possible to give the best that is in me this year so that they, and you, will feel that their confidence has not been misplaced.

Mrs. J. Martyn Schattyn

It was indeed a "happy" Convention, auguring well for the future of the Auxiliary when such capable and dedicated people were chosen as your officers: Mrs. Lawrence S. Crispell, as president-elect; Mrs. Harry H. Harkness Jr., Mrs. Julius W. Well, Mrs. William B. O'Connor and Mrs. James K. Ritterbusch as the four vice presidents; Mrs. Wallace D. English as recording secretary; Mrs. Robert H. Barnes, treasurer; Mrs. Guy D. Callaway Jr., auditor; Mrs. Robert A. Mayer, corresponding secretary; and Mrs. Jordan Kelling, parliamentarian.

We owe an expression of gratitude to our charming National President, Mrs. Harlan English of Danville, Illinois, for the inspiration she brought to our Convention and for her forceful speech at our Monday luncheon.

Under the stress of the times, with matters in the field of health legislation coming to a head, the resolutions presented to the Convention and passed were characteristic of our determined effort to hold firm in the face of great odds. We endorsed the AMPAC organization (MMPAC here in Missouri), assuring our support to Dr. Ralph Perry of Kansas City, who is Missouri's Chairman. Appointed from the Auxiliary to assist Dr. Perry is Mrs. William H. Hickerson of Independence, Mrs. Jordan Kelling of Waverly, and Mrs. Edmund V. Cowdry Jr., of Clayton.

We also assured the continuance of the Medical Student Loan Fund, adding to this recommendation the suggestions that a fact-finding committee work with the new Medical Student Loan Fund Chairman, Mrs. David O. Allen of Joplin, in reviewing Missouri's policy of aid to students to guide us in our future planning.

A new Senior Citizen's Service Committee was recommended by the retiring president, Mrs. Frederick E. Wade, as an important step in counteracting the ever mounting current of ill will being created among the elderly by proponents of the King-Anderson bill. To prey on the emotions of the aged for the purpose of socializing their descendents is a cruel thing, especially since many of these old folks cannot possibly hope to benefit personally by such a bill. Statistics and facts tell the truth but they are cold and, to many, difficult to comprehend. The emotional appeal can be overdone, but there are occasions when we must be prepared to fight fire with fire, and the time is running out.

Plans for our Fall Board and Conference are still in the earliest planning stages. However, this much can be said: the dates are Wednesday and Thursday, October 17 and 18 (after the National Fall Conference as recommended by the convention body) at the Mark Twain Hotel in Hannibal. Our hostess group will be the energetic Marion-Ralls-Shelby Auxiliary. These ladies have already appointed the committees and assure us that everything will be done to make this a worthwhile Conference. Husbands are urged to be in attendance with us. I am sure our varied state activities will come as a surprise to many of them.

One of our greatest assets is our growing list of interested and active members-at-large. These "one-woman" auxiliaries can be ever so effective in small communities, and we salute their crusading spirit. We hope many of them will find the time to attend our Fall Conference and let us all benefit by their experiences.

At this writing snow is falling, but when you read this page the moisture from this same snow will have helped nature put forth her annual Spring display of blossoms.

By this same token may we look forward to the fruition of our hopes and ideals; to the moment when we can again "point with pride" to an America that is shaking off its lethargy and inertia, and emerging with sure quick strides from the cringing apologetic attitude which any true American detests.

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**JOHN S. SPRATT, JR., M.D.,** *and*
**JOSE M. SALA, M.D.,** *Columbia*

# The Healing of Wounds Within Irradiated Tissue

**Alterations in the healing of wounds secondary to the effects of radiation on the noncancerous cells and tissues and the restrictions placed on the surgical procedures in irradiated tissues are discussed.**

**Dr. Spratt is Chief Surgeon, and Dr. Sala is Chief Radiotherapist, The Ellis Fischel State Cancer Hospital, Columbia.**

The peculiarities of the healing of wounds within irradiated tissue are pertinent to the surgery of cancer. The biologic effects of irradiation within a mass of tissue are distributed randomly to all cell types and the cells of normal tissue are affected as well as the cells of a neoplasm. The purpose of this paper is to discuss some of the alterations in the healing of wounds secondary to the effects of radiation on the noncancerous cells and tissues.

The retardation of wound healing by irradiation is dependent upon the amount of radiation and the length of time over which that dose is administered. In 1931, Pohle demonstrated in rats that 1000r in a single dose given one to 30 days before wounding exerted no demonstrable influence on wound healing as measured by the strength and morphology of the scar[6] although more refined measurements have shown that as little as 500r, single dose, preoperatively will reduce the rate of wound contraction.[3] Any tissue receiving in excess of 1300r from a single dose is subject to spontaneous necrosis.[6]

Van den Brenk[11, 12] has demonstrated clearly that no budding or proliferation of either lymph or blood capillaries occurs after wounding in mammalian tissue that has received previously more than 2000r in a single dose. However, capillary regeneration occurs normally in tissues irradiated with single doses of 1000r or less. Following single doses of from 1000 to 2000r, capillary regeneration occurs irregularly and the flow of red blood cells through these capillaries is slow. In addition, the capillaries in tissue receiving over 1000r tend to rupture. Extensive lymph and blood capillary budding normally follows injury and infection in non-irradiated tissue and the inhibition of capillary budding by irradiation may contribute to necrosis and the non-healing of wounds within irradiated tissues. When the capillary permeation of heavily irradiated tissues occurs, it proceeds from the adjacent non-irradiated tissues.[10] Such revascularization is a slow and incomplete process and a relatively avascular scar persists.

By protracting the administration of the total dose over many days, the tolerance of tissue to radiation can be increased with some preservation of the ability of wounds to heal. Protraction permits sublethally irradiated cells a chance to regenerate.[5]

A clear knowledge of the correlation of the time-dose factors of preoperative irradiation with the ability of wounds to heal is necessary if increased mortality and morbidity from surgical procedures are to be avoided, but concise data correlating the frequency of postsurgical complications with various time-dose factors in irradiated human tissue are not abundant. A midpelvic dose of 4000 rads given by protracted therapy ( three to four weeks) seems compatible with post irradiation hysterectomy[8] and lymphadenectomy,[2] but when the surgery is performed in pelves that have received 6000 rads or more (five to six weeks) the frequency of complications rises precipitously.[2]

Difficulty with wound healing can be expected in any tissue that has been irradiated to "tolerance" since treatment to tolerance implies less capacity to regenerate after injury and a reduction in the number of blood and lymph vascular conduits with resulting ischemia.

Resections in tissue irradiated to tolerance are possible, provided that no vital reconstruction such as anastomosis of irradiated intestine or ureters is attempted since these anastomoses are subject to spontaneous dissolution.[9] Resection of a total mass of heavily irradiated tissue is feasible in certain instances leaving wound margins of non-irradiated tissue and, if a tensionless approximation of the non-irradiated tissues can be effected, the situation is ideal. Unfortunately, this is not the rule and irradiated structures such as ureters, intestines, and/or arteries may be subject to exposure, fistula formation and hemorrhage.

Recent radiobiological studies in vitro suggest that surprisingly small doses of radiation may impair the reproductive viability of a large percentage of the cells within a cancer, while a large dose beyond tissue tolerance might be requisite for complete tumor sterilization. These reproductively dead cells may appear morphologically normal for a while though they may enlarge.[7] This observation may have a practical application if one assumes that the use of a small dose of preoperative irradiation may reduce the chances of local implantation and the growth of colonies of cells scattered during the surgery. If cumulative survival data establish that these moderate doses of preoperative irradiation ranging from 1500r in one week to 4500r in four weeks can achieve a reduction in the frequency of implantation and dissemination of cancer without additional surgical morbidity then the more frequent use of preoperative irradiation for such tumors as carcinoma of the lung, rectum, bladder, breast and uterus may be justified.[1, 4, 8]

Important considerations before undertaking surgery in irradiated tissue should include: (1) the exact location and size of all external ports, (2) the direction of the beam traversing these ports and (3) the approximate time-dose factors of radiation received by the skin at each port and the dosage received by all organs and tissues included in the area of contemplated surgery. Higher energy radiation has an effect upon tissues similar to that achieved by lower energy irradiation but the effect is more deceptive. The higher energy sources of Cobalt-60 teletherapy and betatron produce maximum ionization well below skin surface and a greater dose to the deeper tissues can be delivered without effecting detectable changes in the skin at the port of entry. Also, a considerable percentage of the incident beam from these high energy sources may traverse the entire body, particularly in thin individuals, and leave through a cutaneous exit port. To this exit port is added the forward scatter of the secondary radiation produced in the tissues. The exit ports can receive a significant irradiation effect and the location of these exit ports should also be considered before surgery. Gross appearance is not an infallible index of irradiation effect, and the surgeon must know what has been irradiated. With these various radiobiological observations and radio-therapeutic factors in mind, specific surgical restrictions still exist such as:

1. Closed space abscesses in tissues that have been irradiated have to be drained promptly and appropriately in order to prevent extensive necrosis of the irradiated tissues.
2. Anastomoses of irradiated bowel heal slowly and often will not heal at all unless proximal diversion of feces is effected for a period of months.
3. Pedicle flaps that are to cover irradiation ulcers should generally be sewn to non-irradiated tissues.
4. Heavily irradiated avascular tissue should not be included in the base or body of a pedicle flap.
5. Colostomies, ileostomies or ureterostomies should not be constructed in fields of previous external roentgentherapy.
6. Surgical incisions should be planned to avoid fields of irradiation and should never be angulated in and around irradiated areas.
7. Necrotic tissue in fields of irradiation will not hold sutures and the control of hemorrhage in these areas frequently necessitates the ligation of vessels proximal to the irradiated tissue.
8. Abdominal incisions through fields of irradiation heal slowly and are subject to necrotizing infections and wound evisceration.

9. Fractured irradiated bones heal poorly and secondary infection yields a progressive osteomyelitis that is difficult to manage.

10. Simple biopsies in heavily irradiated tissue may be followed by extensive necrosis. Endoscopic biopsy of a heavily irradiated area in the anterior rectal wall followed by necrosis of the rectovaginal septum and the development of a rectovaginal fistula is a typical example.

All restrictions placed on surgery in irradiated tissue are attributable to the decreased vascularity of irradiated tissue, the inability of the irradiated tissue to exhibit the normal regenerative response to injury and the susceptibility of irradiated tissue to spontaneous necrosis in the presence of trauma or infection.[9]

## CONCLUSION

In spite of present enthusiasm for the possible chemotherapeutic and immunological eradication of cancer, surgery and radiotherapy remain the only effective modalities for the treatment of most forms of human cancer. The awareness of the poor healing of wounds within irradiated tissue and a close degree of cooperation in the planning of cancer therapy are important to both the surgeon and the radiotherapist if the best level of cancer therapy with a minimum of complications is to be achieved. The general aspects of wound healing and the restrictions placed on the surgical procedures in irradiated tissues have been discussed.

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**DANIEL J. LAUER, M.D.,** ***Kansas City***

# The Evaluation of the Hypertensive Patient

The evaluation of the patient with elevation of the systemic arterial blood pressure is one of the most common problems encountered by the practicing physician. Following the determination that true hypertension does exist, the next step is evaluation of possible etiologic factors. Fully 80 per cent of such patients will finally be given the diagnosis "essential hypertension," i.e., hypertension due to unknown cause. In spite of this fact, the search for causes of secondary hypertension is most important for within this group are the truly "curable" hypertensive patients.

**Various syndromes of arterial hypertension are reviewed briefly from the standpoint of etiology and pathogenesis and a method of clinical evaluation is presented.**

**Dr. Lauer is Senior Resident in Medicine, Kansas City General Hospital, Kansas City.**

The purpose of this paper is to review the various etiologic factors responsible for the syndrome of arterial hypertension and to present the method of evaluation in current use at the Kansas City General Hospital.

The first problem for consideration is the simple matter of accuracy of determination of arterial blood pressure. The false elevation of both the systolic and diastolic readings associated with an obese arm or loose cuff are well known. Furthermore, a recent study, in which intra-arterial pressures were recorded simultaneously with sphygmomanometer recordings, revealed errors in the latter as high as 30 mm. Hg; this occurring in a wide variety of patients of various body types, the error as likely being a false low as a false high. There was no predictable pattern elicited. In spite of these inaccuracies the sphygmomanometer remains the best practical method of evaluating blood pressure.

A second factor to be considered in the initial evaluation is the normal hypertensive response to stress and anxiety. Every physician is familiar with the patient with an initial cuff reading of 140/90 which drops to 110/70 after 10 minutes of quiet sitting. The exact point at which this normal reactivity passes into an abnormal state has not been defined. Indeed, this inability to define clearly the abnormal hypertensive state is one of the biggest stumbling blocks to better understanding of it. Just what sphygmomanometer reading constitutes hypertensive disease? The insurance company statistics, when evaluated from a prognostic standpoint, put the upper limit of normal at 95 to 100 mm. Hg diastolic pressure; as in the evaluation of any biologic phenomenon, however, wide variability exists in individual cases.

It should be noticed that the definition of hypertensive syndrome is in terms of diastolic pressure. This syndrome must be clearly differentiated from that of systolic hypertension (e.g., 190/90) which is so commonly seen in the elderly. A widened pulse pressure of this nature indicates loss of elasticity of the vessels (arteriosclerosis) or an increase in cardiac output such as that which is associated with thyrotoxicosis, anemia and arterio-venous shunts. Attempts to "lower the blood pressure" in such situations may lead to catastrophe with inadequate perfusion of brain, heart or kidney.

Once the syndrome of true elevation of the diastolic blood pressure has been determined, the physician is faced with the problem of cause. Since roughly eight out of 10 patients with the hypertensive syndrome are eventually given the diagnosis "essential hypertension," this syndrome will be reviewed first.

## Essential Hypertension

Is essential hypertension a disease? Platt presents statistics which support his concept of a "specific genetic disorder," becoming manifest clinically in the fifth and sixth decades. In fact he feels that he has demonstrated three definite phenotypes, or clinical syndromes, of "inherited hypertension."[1] Pickering presents an opposite theory: hypertension is a "spectrum" syndrome with variations from the average due to various environmental and degenerative factors. The variability of arterial blood pressure is the result of quantitative, not qualitative, factors.[2] Page interprets hypertensive syndromes as a manifestation of the interplay of the various factors which regulate tissue perfusion: blood volume and viscosity; cardiac output; vascular caliber and elasticity; and various neural and hormonal factors. He therefore classifies hypertension according to the factor which is most abnormal in this interplay: neural, endocrine, cardiovascular and renal. This "mosaic theory" of the pathogenesis of hypertension discards the concept of essential hypertension and deals only in terms of mechanisms of production of hypertension.[3]

Most of the current research in hypertension centers on three possible etiologic factors: salt, aldosterone and renal humoral mechanisms. The relationship between salt ingestion and hypertension has long been recognized, and salt restriction has become the cornerstone of therapy in this syndrome. The mechanism by which salt contributes to the hypertensive state is, however, still unknown. Imbibation of salt by the arteriolar walls and consequent increase in the peripheral resistance, increase in extracellular fluid volume and other mechanisms have been proposed, but none proved.[4]

The role of the adrenal salt-retaining hormone, aldosterone, has likewise been extensively studied. There is equivocal evidence that aldosterone excretion is elevated in patients with essential hypertension and the accelerated or malignant phase of hypertension is constantly associated with such an elevation. The problem of cause and effect is, however, still unsolved.[5]

The role of the renal juxtaglomerular apparatus has also been intensively studied, particularly in relation to morphologic changes occurring simultaneously in this apparatus and in the zona glomerulosa of the adrenal gland (this zone being the area of production of aldosterone).[6] The concept of a "renal-pituitary-adrenal-renal" homeostatic mechanism is as comprehensive as it is vague. At the present time it appears that all of these mentioned factors, and possible other factors not yet suspected, are important in the development of vascular hypertension; their exact role and relationship to each other are as yet unknown.[7, 8, 9]

Although the research on this topic is of great interest, the physician attempting to evaluate his patient receives little help from it. He must consider "essential hypertension" to be an exclusion diagnosis; that is, no cause can be found. Corroborating evidence for this diagnosis is a family history of hypertension and onset between the ages 35 and 60.

With this brief glance at the syndrome of essential hypertension, I will discuss the less common, but therapeutically more rewarding, syndromes of secondary hypertension.

## COARCTATION OF THE AORTA

The adult form of this congenital anomaly is an unusual cause of hypertension. Whether the hypertension is due simply to the constriction of the aorta with increased peripheral resistance or is due to relative renal ischemia is not certain. Since the hypertension is restricted to the upper extremities, the obstructive factor is more likely the dominant one. Although this anomaly is relatively rare, the methods of diagnosis are so simple that they must be considered part of the routine examination of the hypertensive patient. These methods are palpation of the femoral arteries and recording of the blood pressure in the leg. The finding of weak or absent femoral arteries, with a popliteal cuff reading lower than the brachial reading are strongly suggestive of this lesion. The marked male sex incidence, systolic murmur at the base and scapula, and roentgenographic evidence of collateral circulation are confirmatory findings.[10]

The outlook in untreated coarctation is quite variable. A certain percentage of such patients will achieve a normal life span; two out of three, however, die by the fourth decade, the usual causes of death being cardiac decompensation, bacterial aortitis, rupture of the aorta and cerebral hemorrhage. Because of the poor prognosis, it is felt that all patients with this anomaly should undergo surgical repair, preferably before age 20 when degenerative vascular changes usually become apparent.[11]

## HYPERTENSION DUE TO ENDOCRINOPATHY

Although hyperfunction of the pituitary gland can cause vascular hypertension, the signs and symptoms due to the expanding intracranial mass and the endocrine abnormality are more prominent and lead to the diagnosis. Hyperthyroidism may result in systolic hypertension due to increased stroke volume; again, the symptoms and signs of hypermetabolism usually are of greater significance and lead to the correct diagnosis. Various syndromes of hyperfunction of the adrenal glands, on the other hand, may present primarily as a problem of hypertension. These will be reviewed.

### PHEOCHROMOCYTOMA

The distinctive syndrome associated with this unusual lesion has given it wide notoriety in recent years. These tumors arise from the cells of the embryonic sympathetic neuroblast and therefore are found not only in the adrenal medulla, but also in the other chromaffin tissues, the carotid body and the abdominal paraganglia tissue. Although the possibility of this diagnosis is frequently scorned, the presence of more than 400 reported cases in the recent medical literature would lead one to suspect that it may not be as rare as previously thought.

About 90 per cent of these tumors have been found within the adrenal medulla; they range in size from several millimeters to 10 centimeters in diameter. Approximately 10 per cent of these tumors are bilateral, this finding being suggestive of malignant degeneration. The malignant form tends to metastasize early and is seldom functional. The secretion of the functional tumor may be either adrenalin or noradrenalin, either of which produces the clinical picture of hypertension, anxiety, sweating, headache and tremulousness. Although originally described as a paroxysmal syndrome, more recent reports describe a number of such cases with sustained hypertension without the marked vasomotor effects. Hypertension of this type is clinically indistinguishable from essential hypertension.[12]

The age of onset of the paroxysmal syndrome is usually between 20 and 40 and the frequency and duration of attacks is extremely variable. Postural hypotension, increased metabolic rate, hyperglycemia and the occasional occurrence of fever and convulsions are associated findings. It is apparent that all of these findings are identical with those produced by the injection of a large dose of adrenalin or noradrenalin.

The diagnosis of this lesion depends on the clinical syndrome. The paroxysmal form can be suspected from history, whereas the sustained form can be suspected only from pharmacologic testing. The Regitine® test is simple, safe and not time consuming; 5 mg. of the drug is injected intravenously after the establishment of a base-line blood pressure. A drop of 35/25 mm. Hg within three minutes constitutes a positive test and indicates the need for more thorough investigation.[13] Since this test is so simple, and since the sustained form of hypertension due to pheochromocytoma can only be diagnosed this way, I feel that it should be performed on all patients with a hypertensive syndrome. The more definite tests, urinary cathecholamine excretion and peri-renal gas insufflation are difficult, expensive and time consuming, and are certainly not indicated as routine screening procedures. At the present time I feel that a suggestive Regitine® test and/or history are indications for study of urinary cathecholamine excretion. At the present time, the Kansas City General Hospital laboratory is doing the mandelic acid determination of these excretion products. The bioassay technics (as rabbit aortic strip) are too cumbersome and costly for the average clinical laboratory. The technics of collection, preservation and shipping of such specimens are described in articles listed in the bibliography.[14, 15, 16]

I realize that our criteria for selection of patients for study are arbitrary; indeed, both cases of pheochromocytoma diagnosed at this hospital this year have been diagnosed at autopsy; both of the patients were senile and were therefore not considered candidates for extensive evaluation. In spite of such ironical results, it is felt that the indications of positive Regitine® test and suggestive history will, in the long run, result in the highest yield of positive cases which could reasonably be expected.

### ADRENAL CORTICAL HYPERTENSION

Hyperplasia or tumor of the adrenal cortex is almost always associated with hypertension. There are three syndromes of adrenal cortical hyperfunction, each being associated with hypersecretion of a different product. Cushing's syndrome is related to increased secretion of glucocorticoids and is diagnosed primarily from the physical findings of hirsutism, acne, truncal obesity, moon facies and hypertension. Hyperglycemia and elevated urinary hydroxysteroid levels are the positive laboratory findings. The adrenogenital syndrome, due to hypersecretion of the androgenic hormone of the adrenal, is characterized by masculinization and is diagnosed by the increased urinary levels of ketosteroids. In both of these syndromes, symptoms and signs other than hypertension are usually quite prominent and the finding of vascular hypertension is of minor concern. For this reason they are not more fully discussed here.

The third syndrome of adrenal hypertension is, however, manifest almost solely by the elevated blood pressure. This syndrome, first described by Conn, is due to hypersecretion of the mineralocorticoid aldosterone. The clinical picture in this syndrome is protean, the only findings aside from hypertension being those related to the depletion of total body potassium: hypokalemia, muscle weakness, paralytic ileus and electrocardiographic changes. The marked sodium retention associated with aldosteronism may or may not produce edema.[17] It is apparent that this syndrome is difficult to recognize since weakness and edema are so frequently associated with other hypertensive syndromes. The finding of hypokalemia, therefore, in the hypertensive patient who has not been treated with thiazide duretics (Diuril®, Esidrix®) should be investigated with a potassium balance study and radiographic procedures which will demonstrate a suprarenal mass; i.e., intravenous pyelogram and perirenal gas insufflation. The use of the spironolactone Aldactone®, which is a metabolic antagonist to aldosterone, has recently been advocated as a diagnostic test for this syndrome.[18, 19]

### Renal Hypertension

Although the concept of arterial hypertension was not recognized until the latter part of the nineteenth century, Bright noted the relationship of kidney disease to left ventricular hypertrophy in 1833. This remarkable bit of clinical observation lay fallow until 1898 when Bergman isolated the pressor substance, renin, from renal extracts. This finding was again ignored until 1934 when Goldblatt reported his famous work on experimental renal hypertension. Since Goldblatt's paper, interest in the renal origin of hypertension has grown tremendously; indeed, it is difficult to find a current journal of medicine or urology that does not contain an article on this subject. Within the last decade, Page and others have further stimulated this interest with numerous reports of cure of hypertension due to unilateral renal disease.[20]

Hypertension due to renal disease, and renal disease due to hypertension, must be differentiated. The physician evaluating the patient with long-standing hypertension and advanced renal disease is frequently at a loss to tell which came first. Hypertension due to any cause, if persisting over a long period of time, results in arteriolar nephrosclerosis and impairment of renal function.

The pathogenesis of hypertension due to renal disease, on the other hand, is poorly understood. In an excellent review article, Peart lists the possible causes of renal hypertension and reviews the evidence for and against each.[21] The first of these possibilities is failure of the kidneys to excrete a circulating vasopressor substance. The absence of hypertension in the presence of total failure of excretion, i.e., acute tubular necrosis, is strong evidence against this theory. The production of a vasopressor by the diseased glomerulus is a second possible mechanism. The enzyme renin has been shown to split a protein substrate in the serum to yield a highly potent vasopressor which is currently known as angiotensin. The fact that this mechanism has been demonstrated in experimental studies is countered by the inability to demonstrate increased amounts of renin in the renal vein of human subjects with proved renal hypertension. A third possible mechanism is failure of the diseased kidney to produce a normal vasodilator substance. Although such a substance has not been isolated, the demonstration of hypertension in the bilaterally nephrectomized animal ("renoprival hypertension") is supportive evidence for this theory. Finally, stimulation of an extra-renal pressor system (adrenal, pituitary) by the diseased kidney has been proposed as a possible mechanism of renal hypertension. The demonstration of concurrent changes in the juxtaglomerular apparatus and adrenal gland supports this theory.

It is quite possible, of course, that no one of these possibilities is the common mechanism; any or all of them may be operative in any given case.

Clinically, any disease of the kidney may produce hypertension, the common denominator probably being altered glomerular physiology. Glomerulonephritis, pyelonephritis, obstructive uropathy, polycystic disease, nephrosclerosis, lupus and others cause diffuse bilateral renal changes. The diagnosis of such lesions depends on history, urinalysis and pyelograms and they are difficult therapeutic problems. Hypertension secondary to these diseases tends to respond poorly to drug therapy and it is rarely possible to utilize specific therapy on the underlying disease.

Hypertension due to disease in one kidney, on the other hand, is frequently amenable to surgical cure. For this reason it is important to differentiate unilateral from bilateral renal disease in the evaluation of the hypertensive patient.

It has frequently been noted that hypertension may be secondary to severe disease of one kidney, yet this kidney may appear to function normally on contrast pyelography; a normal IVP therefore does not exclude unilateral renal disease as a cause of hypertension. Since the majority of these cases are due to vascular disease (renal artery stenosis, thrombosis) it is necessary to do an aortic angiogram to demonstrate the vascular abnormality. Although this procedure of translumbar aortography does carry a certain risk, this risk is not as great as is frequently thought. Poutasse in Cleveland reports 1,500 consecutive such tests without mortality or significant morbidity.[22] The split renal function tests as popularized by Howard and recently modified by Stamey will be discussed later in this paper.[23, 24] These tests are based on the principle that the diseased kidney will show significant deviation from the normal kidney in respect to excretion of water and electrolytes. The measurement of rate of excretion of radioactive substances by counters placed over each kidney is increasing in popularity, both because of accuracy and less patient morbidity.[25]

The question of selection of patients for evaluation for unilateral renal disease is difficult. The young patient without a family history of hypertension, who has been shown not to have a coarctation or adrenal hyperfunction, certainly deserves complete evaluation of split renal function. The patient who develops the accelerated or "malignant" phase of hypertension and the patient who appears to have unequal renal function on routine IVP also should have complete evaluation.

The results of surgery in hypertension due to unilateral renal disease vary greatly according to the type and duration of the lesion. Vascular abnormalities which can be repaired, with salvage of the kidney, offer the best prognosis. Renal parenchymal disease such as unilateral pyelonephritis, in which nephrectomy must be performed, offers the poorest prognosis. Unfortunately, at the present time there is no reliable method for evaluating prognosis in any given case. In general, the elderly patient with evidence of nitrogen retention and/or generalized arteriosclerotic disease is not a candidate for this type of surgery, even if hypertension due to unilateral renal disease has been proved to exist.

## METHODS

Having scanned the various hypertensive syndromes, I shall now present the format used at this hospital in evaluating such patients. Like any "format," this outline is merely an extremely flexible guide, not a formula which must be rigidly followed.

### TABLE I

### HYPERTENSION DIAGNOSTIC CLINIC
### KANSAS CITY GENERAL HOSPITAL

A. Name

B. Age

C. Weight Ideal Weight

D. History: date of onset; paroxysms; pregnancies; renal disease; etc.

E. Physical Exam:
  1. Blood pressure, sitting + standing
  2. Optic fundi
  3. Heart
  4. Abdominal masses or bruit
  5. Femoral pulses

F. Radiographs:
  1. Chest
  2. Skull
  3. IVP

G. Laboratory:
  1. BUN
  2. Blood sugar
  3. Serum Na, K, Co$_2$
  4. Urine specific gravity, albumin, sediment
  5. Creatinine clearance
  6. ECG

H. Regitine® test: baseline; maximum drop

J. Special tests
  1. Hydroxymandelic acid (cathecholamine) determination
  2. Retroperitoneal gas insufflation
  3. Radioiodinated hippuran excretion test
  4. Retrograde pyelogram
  5. Howard or Stamey test
  6. Aortic angiogram

K. Diagnosis

L. Recommendations.

## HISTORY

Aside from morning occipital headache, most patients with hypertensive syndromes have few symptoms related to the hypertension per se. Vertigo, paresthesias, palpitation, dyspnea and edema are all related to cerebral and cardiac changes secondary to the hypertension and are late developments.

A history of paroxysmal episodes of palpitation, sweating and nervousness are obviously important in evaluating for pheochromocytoma.

A history of trauma, back pain or urinary tract abnormalities will lead to thorough investigation of renal function. Of most significance in the history is the date of onset of the hypertension. Previous pregnancies, hospital records and insurance or military physical examinations frequently are helpful in this respect. It is apparent that recent onset of severe hypertension deserves more thorough evaluation than a syndrome that has been slowly progressive over a long period of time.

The family history is of great importance. Although it is frequently not known if ancestors had hypertension, deaths due to cerebral hemorrhage, apoplexy, "coronaries," and uremia are all suggestive of hypertensive cardiovascular disease. The absence of hypertension in the immediate family is, as mentioned, one of the indications for more extensive evaluation.

## PHYSICAL EXAMINATION

The accurate recording of the cuff reading in both arms, standing and recumbent, initially and after a 10 minute rest, are of obvious importance in establishing a baseline.

The blood pressure is also recorded in a lower extremity concomitant with palpation of the femoral pulses.

Careful ophthalmoscopic evaluation of the retinal vessels is extremely important both diagnostically and prognostically. The finding of advanced retinal changes reflects similar lesions in the kidney and is obviously of grave import; the finding of papilledema indicates "malignant" hypertension and therefore signals the need for complete evaluation.

Routine examination of the heart and lungs will reflect the presence or absence of cardiac hypertrophy and/or decompensation. Palpation of the abdomen for abnormal renal or adrenal masses is done, along with auscultation over the mid-abdomen for the vascular bruit of renal artery stenosis.

## LABORATORY TESTS

Following the history and physical examination, certain laboratory procedures are routinely done. The blood sugar is elevated in patients with adrenal hyperfunction. The blood urea nitrogen is helpful in a negative sense, since it is felt that renal azotemia contraindicates extensive evaluation. The serum sodium, potassium and carbon dioxide combining power are determined since hypokalemic alkalosis may be the only objective abnormality in hypertension due to hyperaldosteronism. A clean-voided urine specimen is examined for concentration, albumin and abnormalities of the sediment. The latter determination must be done on a fresh specimen since most formed elements (cells, casts) disappear on long-standing. If the urinalysis and concentrating ability are normal, usually a creatinine clearance study is done to identify more subtle abnormalities in renal function.

The electrocardiogram and chest film reflect the degree of cardiac involvement. A Regitine® test is performed by injecting 5 mg. intravenously after the establishment of a stable baseline. The blood pressure is then recorded continuously for three minutes; a drop of 35/25 mm. Hg constitutes a positive test and indicates the need for further evaluation. If the BUN is not elevated and the patient is not hypersensitive to the dye, an IVP is done.

It is felt that any patient with significant hypertension deserves all of the procedures so far listed. If the Regitine® test is positive, and/or there is a history of paroxysmal attacks, direct measurement of the urinary cathecholamines is indicated. Currently, accurate chemical assay is available and although more expensive than the bio-assay methods (rabbit aortic strip) is also more accurate. Since the cathecholamine excretion products frequently are elevated only when the blood pressure is elevated, collection of the 24 hour urine specimen should be attempted only at those times. If the Regitine® test and the cathecholamine excretion tests are abnormal, retroperitoneal gas insufflation is indicated to delineate a suprarenal mass.

The evaluation for unilateral renal disease involves split renal function tests and angiography, as mentioned previously. In the Howard test, bilateral ureteral catheterization is done under controlled conditions and the volume and electrolyte concentration of the urine from each kidney is analyzed. Stamey's modification of this test, although technically difficult, appears to give more reliable and clear-cut results. The major defect in both forms of this test lie in the mechanical aspects and in the experience of the operator. The radioiodine excretion tests eliminate many of these technical difficulties.

## CONCLUSION

At the completion of the evaluation the physician can diagnose, with reasonable accuracy, the type of hypertensive syndrome in the particular patient and undertake rational therapy.

## SUMMARY

The various syndromes of arterial hypertension are briefly reviewed from the standpoint of of etiology and pathogenesis and a method of clinical evaluation is presented.

Since this paper is a brief outline, a bibliography of current review articles on this topic is presented.

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*(Continued on page 420)*

CYRIL COSTELLO, M.D., *St. Louis*

# Specific Chemocidal Therapy

**Chemical and biologic investigation and study of treatment of carcinoid tumors is presented.**

**Dr. Costello is with the Department of Surgery of Washington University Medical School and with Barnes Hospital, St. Louis.**

Carcinoid tumor is a relative newcomer to the modern laboratory for chemical and biologic investigation and, for all its relative rarity as a cause of death, it has lent itself well to such scrutiny. It was in 1953 that Lembeck[1] first reported the presence of large amounts of serotonin (5 hydroxy-tryptamine) in carcinoid tumors. Since then, a number of clinical reports have attested to the complicity of this hormone in the clinical syndrome newly recognized with advanced carcinoid disease. Details of the metabolism in the abnormal carcinoid tumors were presented by Sjoerdsma, Weisbach and Underfriend[2] in 1956. Thus we have learned from clinical, physiological and biochemical sources that blood serotonin (5 hydroxy-tryptamine) levels of carcinoid patients range from 0.5 to 2.7 mc.gms. per ml. compared to normal levels of 0.1 to 0.3 mc.gms. per ml. That 5 hydroxy-indole-acetic acid excretion in the urine is increased from a normal range of 2 to 9 mgs. per day to a range of 76 to 580 mgs. per day was concomitantly established.

Trace studies have further indicated that 60 per cent of dietary tryptophan is converted to 5-hydroxy-indole in this disorder, while the remaining dietary tryptophan is presumably utilized in the normal production of body protein and niaocin. These detections stimulated consideration of possible methods of interfering with the cellular metabolism based on the predilection by the carcinoid tumor for dietary tryptophan. Accordingly, trace doses of radioactive tryptophan (DL-tryptophan-2-C-14) were fed to a patient with advanced carcinoid disease. A rapid turnover rate of the material was evident so that with such low radioactive yield and rapid turnover rate, it appeared unlikely that cellular destruction could be effected by radioactivity such as has been accomplished in some thyroid neoplasms with activated iodine.

Moyer[3] suggested the possibility of destroying the insurgent cell by use of blocking agents. Our quest for tryptophan analogues resulted in a supply of 6-Methyltryptophan, graciously provided by Gebhardt.[4] This preparation was fed to the same patient while keeping her on a low tryptophan diet. Definite clinical and anatomic improvements were obtained temporarily, although the patient ultimately died of her disease.

Further investigation has disclosed that tryptophan analogues can be synthesized which can be made more potent in radioactivity than the DL-tryptophan originally used. Instead of using the carbon-activated tryptophan, more concentrated specific action might be obtained by activating the halogen atom in the analogue 5-floro-tryptophan. Feeding such material to a patient with extensive metastases from carcinoid might result in its being incorporated over a long enough period of time in the metastases to produce cancericidal destruction.

Furthermore, the 6-methyltryptophan originally used (with only temporary response) is theoretically inferior to other analogues subsequently discovered. This analogue may be only a partial blocking agent in carcinoid metabolism, whereas at least three other analogues have proven experimentally perfect blocking agents in growth of Escherichia coli. One of these analogues has been prepared to use in future advanced carcinoid cases.

We are presently engaged in preparing and using specific chemicals in an attempt to destroy the malignant carcinoid cell (whose Achilles heel may have been discovered in its avidity for tryptophan) by:

(1) Feeding more powerfully activated analogues of tryptophan, or,

(2) feeding a selected analogue of tryptophan which may be first incorporated into carcinoid protein and then block growth, presumably by erroneous protein synthesis.

We are much deterred by the relative infrequency of advanced carcinoid disease, and yet an advancement in this specific chemocidal therapy of any malignant tumor may prove to be the key to successful control of other malignancies.

*(Continued on page 424)*

**PAUL C. WHEELER, M.D.,** ***Columbia***

# A New Method of Anesthesia For Bronchography

Bronchography, the roentgenographic demonstration of the bronchial tree after instillation of a liquid radiopaque medium, is a useful tool in the study of various pulmonary diseases. However, it is frequently a tedious and trying procedure for both the patient and radiologist, primarily because of a persistent cough reflex. Spraying the nasopharynx and dropping topical anesthetic agents down the trachea is time-consuming for the examiner and frequently the cough is not adequately suppressed. This results in extreme discomfort for the patient and all-too-often unsatisfactory radiographs. Aerosol bombs containing topical anesthesia have been used elsewhere,[1] but it was felt that they were inadequate because of the time involved and the occasional poor anesthesia. To circumvent these problems, a modification of the anesthesia technic previously described by Molnar[2] has recently been instituted with satisfactory results.

**A new method of anesthesia for bronchography is described and the results in a series of patients reported.**

**Dr. Wheeler is Assistant Instructor of Radiology, University of Missouri School of Medicine, Columbia.**

The fundamental change involved machine-nebulization of the anesthetic agent rather than the usual hand nebulization. The Bennett IPPB (Intermittent Positive Pressure Breathing TV-2p) machine was used (fig. 1), the type more frequently associated with therapy for chronic pulmonary diseases.

*Technic.*—The average adult patient is prepared with 100 mg. of Nembutal orally and 0.3 mg. of atropine intramuscularly approximately 45 minutes before beginning the anesthesia. Postural drainage for one half hour during this period is advantageous. Once the anesthesia is started, an x-ray technician, or other person familiar with the apparatus, then continues with the procedure, freeing the physician for other duties.

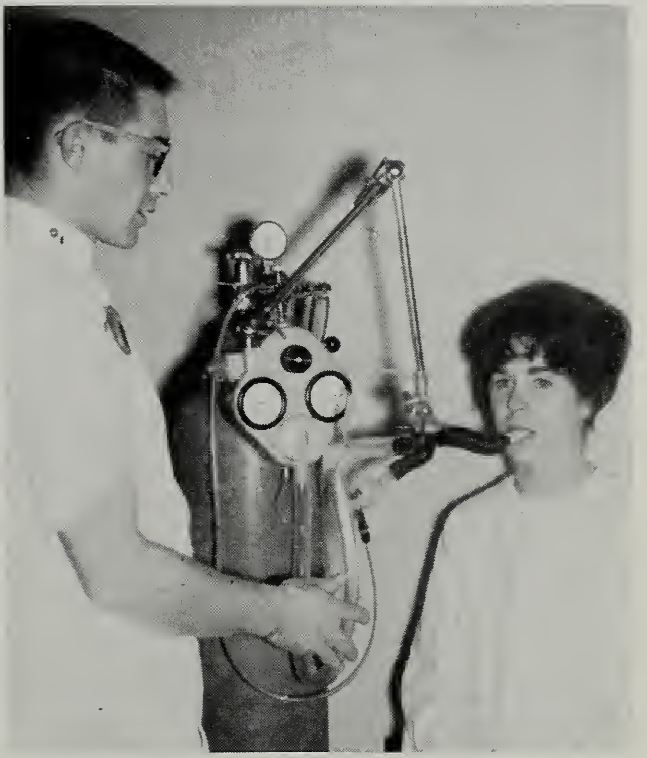

**Fig. 1. The machine used for the nebulization of topical anesthesia is shown attached to a standard oxygen cylinder.**

Four to 5 cc. of 1 per cent Xylocaine are placed in the glass nebulizer. A face mask or disposable mouthpiece (the latter is preferable) is then attached to the patient. He is instructed to inspire through the mouth with the machine cycle, then expire nasally during the negative pressure phase. Nasal expiration is not essential, but will assure adequate anesthesia if a transnasal catheter is to be passed. Instrument settings of 12 mm. positive pressure with 40 per cent oxygen have proved adequate for maximum nebulization. Ten to 15 minutes of this procedure is usually sufficient for good generalized anesthesia of the entire respiratory system, even though some of the agent may remain unused. The machine is then disconnected and the radiologist proceeds with the examination.

*Results.*—In concurrence with previous reports, the effectiveness of this method has been impressive. Although the trial period has admittedly been brief, the procedure has been sufficiently encouraging to adopt this method as standard procedure.

In 20 patients, ranging in age from 23 years to 70 years, this technic has proved superior to methods formerly employed. Whatever the pre-examination diagnosis, the procedure has provided excellent anesthesia. By way of side effects, one patient complained of dizziness, but there were no instances of throat numbness or other odd sensations which may be associated with the drip method. The absence of numbness was a bit discouraging at first, as this sign had previously been associated with successful anesthesia, but we have since learned that post-anesthetic subjective complaints have little relationship to the effectiveness of the bronchial tree anesthesia. Temporary hoarseness has not been encountered, either, apparently because the vocal cords are not as intensely anesthetized as with other technics.

In only three cases did probing of the posterior pharynx and tongue elicit even a mild gag reflex and in these a small amount of Xylocaine instilled with a hand nebulizer proved adequate to depress sensation. With this accomplished, administration of contrast material over the tongue with a curved cannula or by intubation is a simple maneuver, with only occasional mild discomfort when the distal bronchial tree is touched.

It is noted that patients with chronic cough continue to cough during the examination but this does not occur in relation to the actual instillation of contrast material, and probably represents a response of habit.

## COMMENT

Despite the obvious advantages of (1) shortening the examination time for the radiologist, and (2) producing a superior quality of anesthesia, the administered dose of anesthetic agent is about one fourth of that normally used. This represents a total of 40 to 50 mg., which is considerably below the estimated toxic dose of about 500 mg.[3]

The lack of discomfort and inconvenience for all persons concerned with the examination cannot be overemphasized. Violent coughing and retching, seen frequently with the other technics, has disappeared so completely that face shields formerly necessary for the examination are no longer used.

## SUMMARY

Bronchography is frequently a difficult and time-consuming procedure due to inadequate anesthesia of the bronchial tree. Recently a new procedure of machine-nebulization of the topical anesthetic agent has been instituted. In a brief series of 20 patients, this method has proved quite superior to the other technics. In addition to excellent anesthesia of the respiratory system, the radiologist's examining time has been decreased by approximately 50 per cent and the amount of anesthetic agent used reduced by 75 per cent. Because of the excellent results with this technic, our department has now adopted machine-nebulization of topical anesthesia as a standard procedure before bronchography.

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**SOLOMON GARB, M.D.**, ***Columbia***

# Thermonuclear Survival

## *Special Article*

### Basic Principles of Protection From Hydrogen Bombs

At one time it was thought that evacuation from cities could save people from the effects of hydrogen bombs. However, it is now known that an aggressor could cover the entire United States with a lethal level of radioactive fallout. Therefore, evacuation alone would be of no value and would be dangerous.

The most effective measure for protection against hydrogen bombs is the use of shelters. It is advisable to plan on attenuation of fallout radiation to at least one one-hundredth, and if possible one thousandth its outside value. This would give adequate protection against virtually any degree of fallout now known to be possible. To accomplish this, thick walls and roofs are needed.

### Materials

In theory, it makes little difference what sort of material is used. If the thickness of the material is sufficient to bring the weight up to 300 pounds per square foot, it will provide excellent protection against radioactive fallout. There are several materials which are practical for use as a shielding mass—earth, concrete and crushed rock.

*Concrete.*—Concrete weighs about 150 pounds per cubic foot; therefore a layer two feet thick is required to provide the 300 pounds per square foot needed for recommended protection against fallout radiation. However, it would be extremely difficult and expensive to make shelters of such thick concrete. Instead, the concrete thickness usually ranges from six to 12 inches and earth is packed over it to make up the needed protection.

*Earth.*—Earth weighs about 100 pounds per cubic foot; therefore a layer three feet thick is needed for recommended protection against fallout radiation. Obviously, this weight of earth must be supported and only two materials, reinforced concrete and steel, are suitable. Wood is not usually a recommended supporting material underground since it will decay and rot under the ground, with eventual collapse of the shelter. However, in special circumstances wood might be used.

Another hazard against which shelters might protect is direct radiation from the fireball. This radiation, consisting of high-energy gamma rays and neutrons, is much more penetrating than the radiation from fallout. At least half the persons in an ordinary fallout shelter will die of radiation if the fireball is within a few miles. Protection against this type of radiation requires a mass of about 500 pounds per square foot in each wall and ceiling. This is the equivalent of just over three feet of concrete or five feet of earth. Since direct radiation from the fireball is only a serious problem within a few miles from the fireball, many shelters do not incorporate the extra protection in their design. However, wherever feasible this additional security should be provided.

Protection from the blast effect of a large bomb depends primarily on the materials comprising the shelter. Reinforced concrete six inches thick will support a weight of three feet of earth but will probably collapse under any appreciable blast pressure. The earth cover of a basic civil defense shelter, nine by 12 feet, weighs about 35,000 pounds. A blast overpressure of only five pounds per square inch would add a

**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine*, and are published with permission of that journal.**

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**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

force equivalent to an additional 76,000 pounds and would probably collapse the shelter, burying the occupants. Thicker concrete gives more protection but is also much more expensive.

*Steel.*—Steel, on the other hand, is much more resistant to blast pressures. Corrugated steel pipe (fig. 1) is designed for such peacetime use as culverts and so forth and carries loads far greater than does concrete. A properly buried corrugated steel pipe of the right diameter should give protection against blast overpressures in the range of 50 to 100 pounds per square inch. Roughly speaking, it can be considered at least ten times as strong as the reinforced concrete.

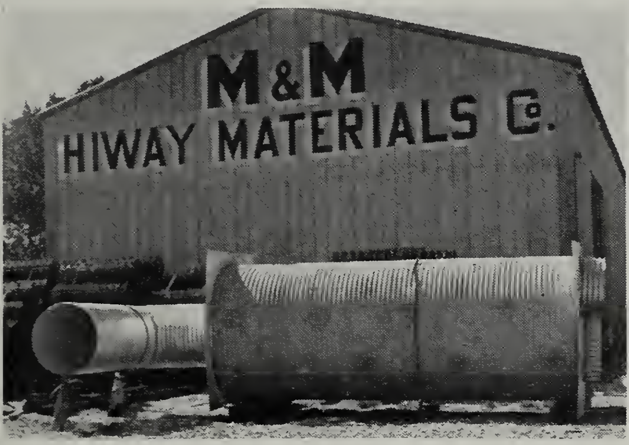

**Fig. 1. Corrugated steel pipe designed for peacetime use.**

It should be noted that if corrugated steel pipe is used as a shelter, its role is that of holding up the weight of earth above and, additionally, that of resisting blast overpressures. It is the earth cover that attenuates the radiation. The steel of the pipe is not thick enough to block out much radiation. Indeed, steel would have to be more than seven inches thick to make an adequate shelter unless it were covered by earth.

Corrugated steel pipe has certain advantages and disadvantages for use as a shelter. It is much cheaper than concrete, easier to handle and much stronger. The major disadvantage is that it must be used in relatively narrow diameters; hence, it is less comfortable than a concrete shelter.

The maximum practical diameter for a steel pipe home shelter is seven feet. As this diameter is exceeded, strength falls rapidly. It may also help to avoid confusion if one is told that government tests on corrugated steel pipe revealed failure at a relatively low blast overpressure, to note that those tests were done on corrugated steel pipes 20 to 50 feet in diameter. Such pipes are quite weak. On the other hand, tests on pipes five or six feet in diameter show them to be strong and capable of withstanding high blast overpressures.

If reinforced concrete is used to hold up the weight of earth, the minimum thickness should be six inches for the ceiling slab and eight inches for the walls. It must be noted that these minimum thicknesses are for concrete which is heavily reinforced with steel and is perfectly mixed, poured, vibrated and cured. If any one of these aspects is substandard, the roof may collapse under the weight of the earth. Even if all aspects are perfect, this construction is designed only as a defense against fallout radiation. It probably cannot resist the additional force of a blast wave, even of the relatively low order of five pounds per square inch (720 pounds per square foot).

If a more adequate concrete shelter is desired, it would be well to double the thickness of the reinforced concrete making it 16 inches for walls and 12 inches for ceiling slab. This becomes difficult and expensive because of the forms and braces needed to hold up such a weight of concrete before it sets properly.

For large shelters, designed as military headquarters, and so forth, reinforced concrete covered with earth is the most practical material since by bracing it with weight-bearing interior partitions and steel beams it can be made quite large without losing much strength. Furthermore, with this type of shelter building costs per cubic foot tend to become lower as the size increases. Although the reinforced concrete shelter has a number of disadvantages for the average family, it has one advantage. It can be built large enough to provide real comfort for the occupants. Thus, someone to whom comfort is important, and who is willing and able to pay for it, might do well to have a reinforced concrete shelter constructed.

## COMFORT

The question of comfort in a shelter requires some consideration. If shelter dimensions are compared to house dimensions, they will seem cramped indeed. However, it must be remembered that a shelter is an emergency, lifesaving device. Its dimensions should be compared to those of a foxhole which is also an emergency lifesaver. Even the smallest shelter provides much more room per person than a foxhole or, for that matter, a station wagon. In some corrugated pipe shelters it may not be possible to stand erect. However, one can always stretch lying down.

For those who are willing to sacrifice a little comfort for greater safety and much lower cost, a corrugated pipe shelter covered with earth is a good choice.

### WARNING TIME

Another aspect to be considered in discussing shelters is the amount of warning time. If the warning time is short or absent before the bombs burst, most people would not be in the shelters and, therefore, could not be protected against blast, heat radiation, flying objects or the initial neutron and gamma radiation from the fireball.

On the other hand, there will always be some warning before fallout begins. The bomb flash will be visible for at least 100 miles, and the fallout will not begin for at least 30 minutes, leaving adequate time to reach shelter in most cases.

### COMPONENTS OF A HYDROGEN BOMB SHELTER

The following is a list of the components of a hydrogen bomb shelter.

*Dimensions.*—The dimensions of a shelter should provide at least 70 cubic feet of volume for each occupant. Since some of this space will be needed for food and water storage any extra space will be quite helpful, although not essential. In an emergency, a lesser volume can be tolerated readily. It is worthy of note that the minimum volume, 70 cubic feet per person, is far greater than that provided in an automobile or bus. In the usual sedan the total available space is about 17 cubic feet per person, and of that a substantial portion is taken up by the seat, leaving less than 15 cubic feet per person of free space. The average human body takes up between two and three cubic feet.

*Location.*—It is usually better to locate a shelter outside a house, in a yard. All houses are inflammable, and in a hydrogen bomb explosion houses as far as 20 miles from the fireball may catch fire. The risk of fire is less with houses whose exteriors are brick, stone or asbestos. A shelter within a house provides a slightly smaller chance of survival than one outside.

In many areas, the water level is within four feet of the surface; therefore excavation for a shelter is impractical. In those areas an aboveground shelter covered with a mound of earth will be needed. It will be almost as safe as a shelter beneath the surface.

It may be possible to locate a shelter near several homes. This can be a great advantage in respect to cost. A shelter for two families would not cost much more than a shelter for one family.

*Entrance.*—The entrance to the shelter should be so arranged that there are preferably two right-angle turns before the shelter proper is reached. This is advisable because there is some scattering of radiation around corners. If the two right-angle turns are not practical in a particular location, there is an alternative way of protecting the entrance. Sandbags are stored within the shelter, and when the occupants are inside and the door is closed the sandbags are piled against the door to a three foot depth to block out radiation coming through the door.

*Emergency Exit.*—An emergency exit is helpful but not essential. Its major effect is a psychologic one, preventing a feeling of being trapped. In theory, the emergency exit would be used if the main entrance were blocked by debris from the explosion. However, debris can be expected only within about 10 miles of the explosion. If an emergency exit is provided, it should be tightly closed, and a three-foot thickness of sandbags should be piled against the inside of the emergency exit to protect against the radioactivity outside. Alternatively, the emergency exit can be a pipe 36 inches in diameter, filled with loose dry sand, and with a sliding door at the bottom. To use it, the door is opened allowing the sand to pour into the shelter proper.

*Electricity.*—If possible, a 15 or 20 ampere capacity electric wire should be run into the shelter. During periods when attack seems imminent, it will be prudent to spend as much time as possible in the shelter, and it will be easier to persuade a family to stay there if electricity is available to run the ventilation system, heat food and provide light.

*Aerial.*—Each shelter should be provided with an outside aerial for a transistor radio.

*Paint.*—The inside of all shelters should be painted white or a light color to obtain the greatest efficiency from flashlights.

*Other Requirements.*—Each shelter should possess an adequate ventilating system, sanitary system and stored food and water. These items will be considered in detail in subsequent articles.

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## CHEMOCIDAL THERAPY

*(Continued from page 418)*

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Donald M. Dowell, M.D.

# President's Message

Increasing political pressure against private enterprise, including the private practice of medicine, is constantly evident.

During the month each member received a letter concerning the formation of the Missouri Medical Political Action Committee (MMPAC). As explained, this is based on the same premises that caused the formation of AMPAC on the national level. Both are separate entities from the Missouri State Medical Association and the American Medical Association, but members of both organizations should and do have great interest in their work and in their support. I hope that most members have shown their support by contribution to MMPAC by this time. If you have not, please address your communication to James C. Sisk, M.D., Missouri Medical Political Action Committee, 605 Landreth Building, 320 N. Fourth St., St. Louis 2, Mo.

D. M. Dowell, M.D.

# EDITORIAL

## KENNETH C. HOLLWEG NAMED PRESIDENT-ELECT

The House of Delegates of the 104th Annual Session of the Missouri State Medical Association elected Kenneth C. Hollweg, M.D., Kansas City, as President-Elect. Dr. Hollweg will serve as President-Elect during the ensuing year and will be installed as President at the Annual Session in Kansas City, March 24, 25, 26, 27, 1963. Donald M. Dowell, M.D., Chillicothe, was installed as President at the 1962 Session.

Kenneth C. Hollweg, M.D.

Dr. Hollweg became a member of the Association in 1944. He served on the Council of the Association from 1958 and was Chairman of the Council during the last year.

His preliminary education was received in St. Louis, continuing at St. Louis University and received his M.D. degree from St. Louis University School of Medicine in 1939. He interned at St. Louis City Hospital and held a residency at St. Joseph Hospital, Kansas City. His specialty is radiology.

Dr. Hollweg was born in St. Louis on December 4, 1913. He is married to the former Dorothy V. Ochs and they have three children, Kenneth, 17; Barbara Lee, 14, and Timothy, 9.

Activity in the Jackson County Medical Society has included being secretary; chairman of the advisory committee of radio and TV; chairman of the advisory committee to the Jackson County Woman's Auxiliary; chairman of the Medical Business Bureau; committeeman of the speakers' bureau, and delegate from the Jackson County Medical Society to the Missouri State Medical Association at several different times.

Dr. Hollweg is a member of Sertoma and the Kansas City Chamber of Commerce. Other medical organization memberships include the Radiological Society of North America, American College of Radiology, Diplomate of American Board of Radiology, International College of Radiology, Kansas City Academy of Medicine and the Kansas City Southwest Clinical Society. He is a Lt. Col. M.C., Air Force Reserve, having served in World War II.

Other officers elected at the 1962 Annual Session are John I. Matthews, M.D., Jefferson City, Secretary; Charles R. Doyle, M.D., St. Louis, Treasurer; C. G. Stauffacher, M.D., Sedalia, E. L. Spence, M.D., Kennett, and Forrest C. Long, M.D., Savannah, Vice Presidents; Leonard T. Furlow, M.D., St. Louis, Chairman of the Council; Byron M. Stuart, M.D., Boonville, Vice Chairman of the Council; Durward G. Hall, M.D., Springfield, and H. E. Petersen, M.D., St. Joseph, delegates to the American Medical Association, with Guy N. Magness, M.D., University City, and J. Loren Washburn, M.D., Versailles, alternates. Hector W. Benoit Jr., M.D., Kansas City, was elected Councilor for the 7th District to take the place of Dr. Hollweg. Other Councilors were reelected.

Minutes of the House of Delegates of the 1962 session will appear in the July issue of MISSOURI MEDICINE.

# Ramblings of the Field Secretary

A successful Annual Meeting of the Missouri State Medical Association, where approximately 850 physicians registered, offered members over the state a real March scientific treat. However, medicine marches on so more good scientific programs in Missouri are scheduled for the near and more distant future. Some of these will be held in May with two specific ones mentioned at this time.

The Seventh Annual Spring Clinical Conference at the University of Missouri Medical Center will be held on Wednesday and Thursday, May 9 and 10. It is acceptable for 10¾ hours of Category I Postgraduate Credit by the American Academy of General Practice. The program, in detail, appears elsewhere in this issue of MISSOURI MEDICINE.

The fifth Annual Conference on the Handicapped in Missouri, sponsored by the University of Missouri, the Missouri Health Council and the Nemours Foundation of Delaware, takes place on Friday and Saturday, May 11 and 12, in the auditorium of the University of Missouri Medical Center. This is a state-wide conference with an invitation extended to all Missourians who have an interest in the handicapped on any age level.

The theme of the Conference is "Current Views on the Brain Damage Complex." On Wednesday evening, May 11, a dinner will be held at Hotel Daniel Boone with speakers to be President Elmer Ellis of the University of Missouri and Dr. A. R. Shands Jr., Medical Director of Nemours Foundation. There is no registration of the Nemours Foundation. There is no registration fee for the Conference. This two-day program also appears in this issue of MISSOURI MEDICINE.

The annual meeting of the Missouri State Medical Foundation was held at the Chase Hotel on Monday evening, March 19, immediately following the second session of the House of Delegates of the Missouri State Medical Association. The By-Laws of the Foundation state "Membership in the Missouri State Medical Foundation shall be composed and limited to members in good standing of the Missouri State Medical Association."

The Foundation meeting was called to order by the President, R. O. Muether, M.D., St. Louis. He presented an up-to-date status of the Foundation's Loan Program and reported that the Foundation had received a Federal Tax exemption letter dated January 29, 1962, declaring the Foundation exempt from Federal Income Tax and declaring contributions made to the Foundation by donors deductible on their Federal Income Tax reports.

An election for the Board of Trustees of six members of the Foundation was held with the following elected: For a one year term, Kenneth C. Hollweg, M.D., Kansas City; for a two year term, Leonard T. Furlow, M.D., St. Louis; for a three year term, R. O. Muether, M.D., St. Louis; for a four year term, Ben Bull, M.D., Ironton; for a five year term, W. W. Tillman, Springfield; for a five year term, Charles R. Doyle, M.D., St. Louis.

Following adjournment of the annual meeting of the Foundation, a short session of the newly elected Board of Trustees was held. The following officers for the Foundation were elected: President, Leonard T. Furlow, M.D., St. Louis; Vice-President, Kenneth C. Hollweg, M.D., Kansas City; Secretary-Treasurer, Charles R. Doyle, M.D., St. Louis.

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Experience in over 14,000,000 Americans confirms the fact that, in most patients, the potential benefits of 'Thorazine' far outweigh its possible undesirable effects.

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# News—Personal and Professional

The American Society of Abdominal Surgeons meeting early in April elected **Durand Benjamin**, M.D., St. Louis, as vice president.

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At a meeting of Scott Central High School PTA in Sikeston in March, the speaker was **Thelma C. Buckthorpe**, M.D., Sikeston. She spoke on "V. D. Among Teenagers."

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The Samaritan Hospital staff of Macon, recently elected **Howard Miller**, M.D., Macon, as secretary of the staff.

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The Missouri State Board of Registration for the Healing Arts will offer Part I and Part II of its examination on May 30 and 31. Part I will be offered on May 30 and Part II on May 31. Part I of the examination will be offered only to those who will also be taking Part II.

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"Function of a Civil Defense Emergency Hospital" will be the program of the St. Louis Medical Society on May 15, at 8:30 p.m. **Carl D. Siegel**, M.D., Sedalia, Chairman of the Committee on Civil Defense Disaster Medical Care of the Association, and Mr. Kenneth Mayfield, mobilization chairman of the State Division of Health, will present the program.

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"Infertility: Evaluation and Management" was the title of the 13th annual Dr. F. G. Thompson lecture on April 16 in St. Joseph. The lecture was sponsored by the Thompson-Brumm-Knepper Clinic.

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The staff of Lutheran Hospital, St. Louis, recently elected **Paul M. Parashak**, M.D., as president. Other officers elected are **E. C. Kienzle**, M.D., vice president; **Donald T. Behrens**, M.D., secretary-treasurer; **George A. Daman**, M.D., president-elect.

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Speaker at a recent refresher course meeting of professional nurses at St. Mary's Hospital, Jefferson City, was **Everett D. Sugarbaker**, M.D., Jefferson City. Also speaking during the course was **John S. Sennott**, M.D., Jefferson City.

The University of Missouri Alumni Association and the alumni of the School of Medicine paid tribute at a luncheon meeting during the Annual Session of the Association to **M. Pinson Neal**, M.D., Columbia, and **J. Eugene Lewis Jr.**, M.D., St. Louis.

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The Missouri State Surgical Society, at its meeting during the Annual Session of the Association, elected **Eugene M. Bricker**, M.D., St. Louis, as president-elect. **A. P. Rowlette**, M.D., Moberly, presided at the meeting and **Ralph R. Coffey**, M.D., Kansas City, was installed as president.

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Recently appointed to fill one of the two vacancies on the State Mental Health Commission was **Margaret C. L. Gildea**, M.D., St. Louis.

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Physicians in the State of Washington are extending an invitation to physicians who intend going to the Seattle World's Fair to make their visit coincide with the 73rd annual meeting of the Washington State Medical Association in Spokane, September 16 to 19, 1962.

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Recently **Robert C. Kingsland**, M.D., Clayton, was elected president of the Practical Nurse Education Council.

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Among speakers at the annual clinical conference of the Chicago Medical Society in March was **A. N. Arneson**, M.D., St. Louis, who spoke on "Female Genital Cancer."

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A new pamphlet, "Beware! of 'Health' Quacks" has been prepared as an outcome of the joint meeting of the A.M.A. and the Food and Drug Administration on medical quackery last fall. The booklet is available at 5 cents a copy from the A.M.A.'s Department of Investigation.

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The research library of the Institute of Experimental Medicine and Surgery of the University of Montreal reports that it has suffered extensive loss by fire and is requesting that materials be sent them, especially reprints on endocrinology and stress.

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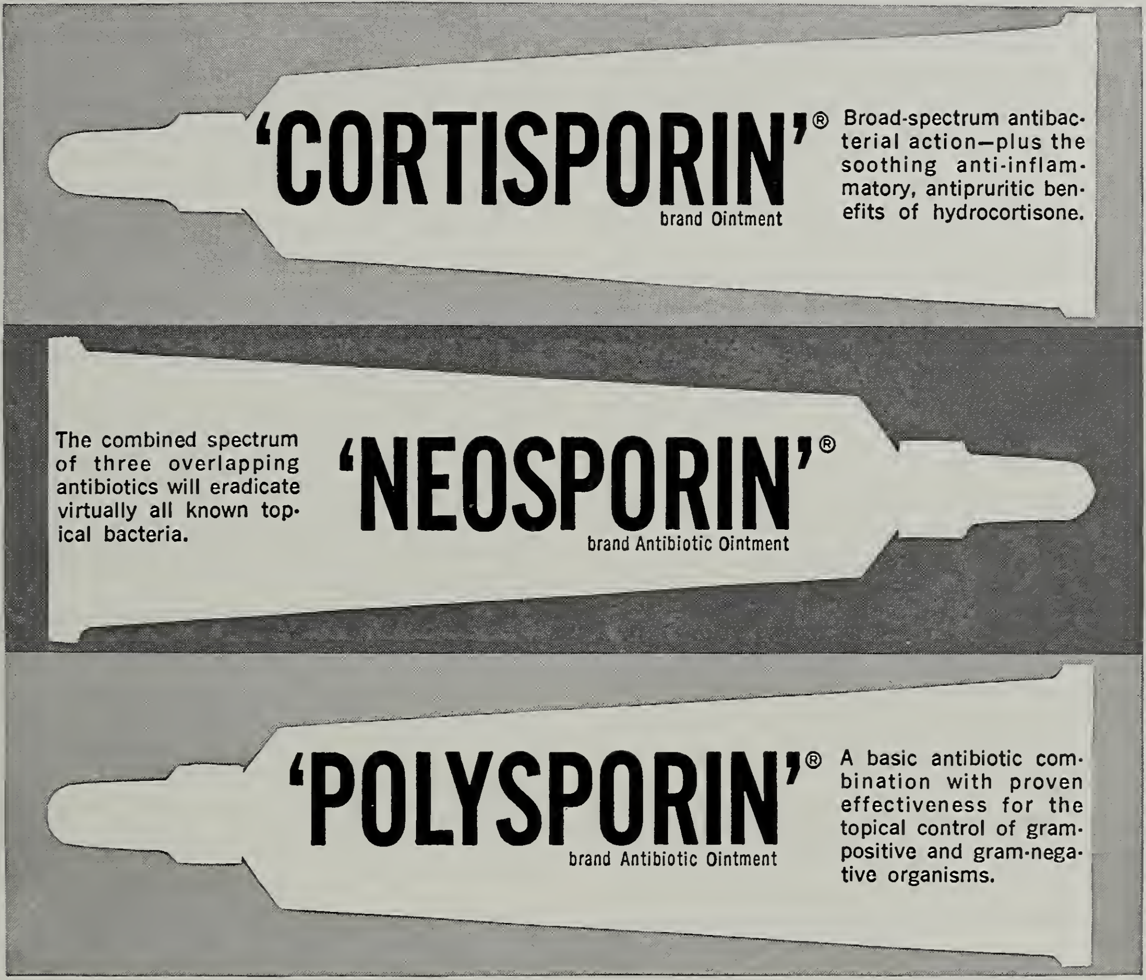
rarely sensitize . . .
give decisive bactericidal action
for most every topical indication



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# New Members

**Mary B. Ames**, M.D., 2318 Lovers Lane, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Ames is a native of Oregon, received her preliminary education at Oregon State University, and her M.D. degree at the University of Oregon in 1947.

**John C. Brazos**, M.D., Smithton, has become a member of Pettis County Medical Society. Dr. Brazos is a native of Illinois, received his preliminary education at the University of Illinois, and his M.D. degree at the University of Illinois in 1949.

**John A. Carrier**, M.D., 4401 Hampton Ave., St. Louis, has become a member of St. Louis County Medical Society. Dr. Carrier is a native of Missouri, received his preliminary education at Drury College, and his M.D. degree at the University of Missouri in 1940.

**John F. Clisham**, M.D., B & L Building, Hannibal, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Clisham is a native of Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1955.

**Donald A. Fakhoury**, M.D., 4030 Oak St., Kansas City, has become a member of Clay County Medical Society. Dr. Fakhoury is a native of Egypt; received his preliminary education at Alexandria University in Alexandria, Egypt, and his M.D. degree at Alexandria University in 1958.

**Ross M. Giem**, M.D., 301 Springfield St., Sullivan, has become a member of St. Louis Medical Society. Dr. Giem is a native of Oregon, received his preliminary education at Walla Walla College, and his M.D. degree at the College of Medical Evangelists in 1952.

**Boyd L. Harris**, M.D., 12921 Grandview Road, Grandview, has become a member of Jackson County Medical Society. Dr. Harris is a native of Nebraska, received his preliminary education at the University of Nebraska, and his M.D. degree at the University of Nebraska in 1958.

**John K. Holcomb**, M.D., 215 North 3rd St., Louisiana, has become a member of Pike County Medical Society. Dr. Holcomb is a native of Missouri, received his preliminary education at Southeast Missouri State College, and his M.D. degree at Missouri University in 1960.

**Morteza Jenab**, M.D., University of Kansas Medical Center, Kansas City, Kansas, has become a member of Jackson County Medical Society. Dr. Jenab is a native of Iran, received his preliminary education at Baker University, and his M.D. degree at the University of Kansas in 1958.

**Charles E. Jones**, M.D., 101 Kansas Ave., Liberty, has become a member of Clay County Medical Society. Dr. Jones is a native of Kansas, received his preliminary education at Kansas University, and his M.D. degree at Kansas University in 1960.

**Kenneth L. Kelsey**, M.D., Aurora, has become a member of Ozarks County Medical Society. Dr. Kelsey is a native of Minnesota, received his preliminary education at the University of Minnesota, and his M.D. degree at the University of Minnesota in 1934.

**Daniel J. Lauer**, M.D., General Hospital, Kansas City, has become a member of Jackson County Medical Society. Dr. Lauer is a native of Ohio, received his preliminary education at John Carroll University, and his M.D. degree at St. Louis University in 1956.

**P. L. Purcell**, M.D., Hull, Illinois, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Purcell is a native of Illinois, received his preliminary education at the University of Illinois, and his M.D. degree at Loyola University in 1939.

**Kenneth L. Rall**, M.D., Medical Center, Columbia, has become a member of Boone County Medical Society. Dr. Rall is a native of Missouri, received his preliminary education at Central Missouri State College, and his M.D. degree at the University of Missouri in 1960.

**William D. Richardson**, M.D., 4608 N. Forest St., Kansas City, has become a member of Clay County Medical Society. Dr. Richardson is a native of Missouri, received his preliminary education at Southern Illinois University, and his M.D. degree at the University of Illinois in 1958.

**Owen J. Swafford**, M.D., Senath, has become a member of Dunklin County Medical Society. Dr. Swafford is a native of Arkansas, received his preliminary education at Arkansas State University, and his M.D. degree at the University of Tennessee in 1957.

# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Buchanan County Medical Society

Ira C. Layton, M.D., Kansas City, vice president of Kansas City Blue Shield, was the speaker at the March 7 meeting of the Buchanan County Medical Society. He discussed, "Trends of Blue Shield." Dr. Layton outlined the progress of Kansas City Blue Shield since its inception nearly 20 years ago. He quoted the phenomenal growth of the plan locally as well as the plans throughout the nation. He pointed out the problems encountered in matching Blue Shield's scope to increasing inflation and rising costs but stated that the plan had kept pace and managed a steady growth since its beginning.

Accompanying Dr. Layton and also discussing Blue Shield were Mr. Stephen F. Bonney, deputy director, and Mr. Tom Collins, director of professional relations of the Kansas City Plan. A question and answer period followed the talks.

The meeting followed a dinner in the Oak Room of Hotel Robidoux. Dr. John R. Forgrave, president, presided. The speaker was introduced by the program chairman, Dr. Charles R. Willman.

A business meeting followed the program. A resolution was adopted urging Missouri's Senators and the District Congressman to oppose King-Anderson bills or any similar legislation.

Herbert C. Senne, M.D., *Secretary*

### Grand River Medical Society

Doctor's Day at the Grand River Medical Society meeting in Chillicothe on Thursday evening, March 8, was a gala occasion, particularly for Dr. Donald Dowell and Dr. Virgil Vandiver. Dr. Vandiver's wife presented him with a red carnation and he in turn presented it to Dr. Donald Dowell as a token of the esteem in which he and the other members of the Society held the new State President-Elect.

Although one or two other carnations adorned doctors similarly esteemed by their wives, it was quite a drop from the 100 per cent who received honorary flowers on Doctor's Day last year—from which it would appear that the medical profession's 1962 public relations program might well begin at home.

However, lest it be thought that the doctors were completely forgotten they were presented with a distinctive gavel by Mrs. Donald Dowell in behalf of her husband and herself. Both the gavel and the kind words which accompanied its presentation were deeply appreciated by the membership.

Following dinner and the introduction of guests the ladies retired to another room where they held their usual business meeting. They then heard an interesting review of a book, "The Judas Tree," by A. J. Cronin which was given by Mrs. Jean Mickelon of Chillicothe.

Speaker for the clinical portion of the meeting was H. B. Overesch, M.D., orthopedist of Kansas City, Missouri. His discussion dealt principally with soft tissue conditions. Among the topics considered were tennis elbow, bursitis, bicipital tendonitis, Baker's cyst, the painful heel, and sprains of the wrist, knee and ankle. The message was received with interest and the question and answer period which followed added considerably to the effectiveness of the information.

At the business meeting Dr. Robert Smith moved that the Grand River Medical Society denounce the King-Anderson bill and pledge their support of the Kerr-Mills bill asking that the latter be implemented in Missouri. Dr. Clark proposed an amendment which included a statement in favor of care for the aged and in favor of financial assistance for those unable to pay, the *Saturday Evening Post* notwithstanding. The motion with the amendment passed unanimously and Dr. Ralph Bohnsack, president, appointed Dr. Robert Smith and Dr. Donald Dowell to draw up the resolution and send copies to the appropriate legislators. The meeting was then adjourned.

Guests present were Dr. Harry B. Oversch, Kansas City, Mrs. Jean Mickelon, Chillicothe, Mr. John Arey, district manager of the W. H. Rorer Co., Mr. Vernon Asmus of the same company, and Mr. Norman Baellow of the J. B. Roerig Company.

Frank R. Daley, M.D., *Secretary*

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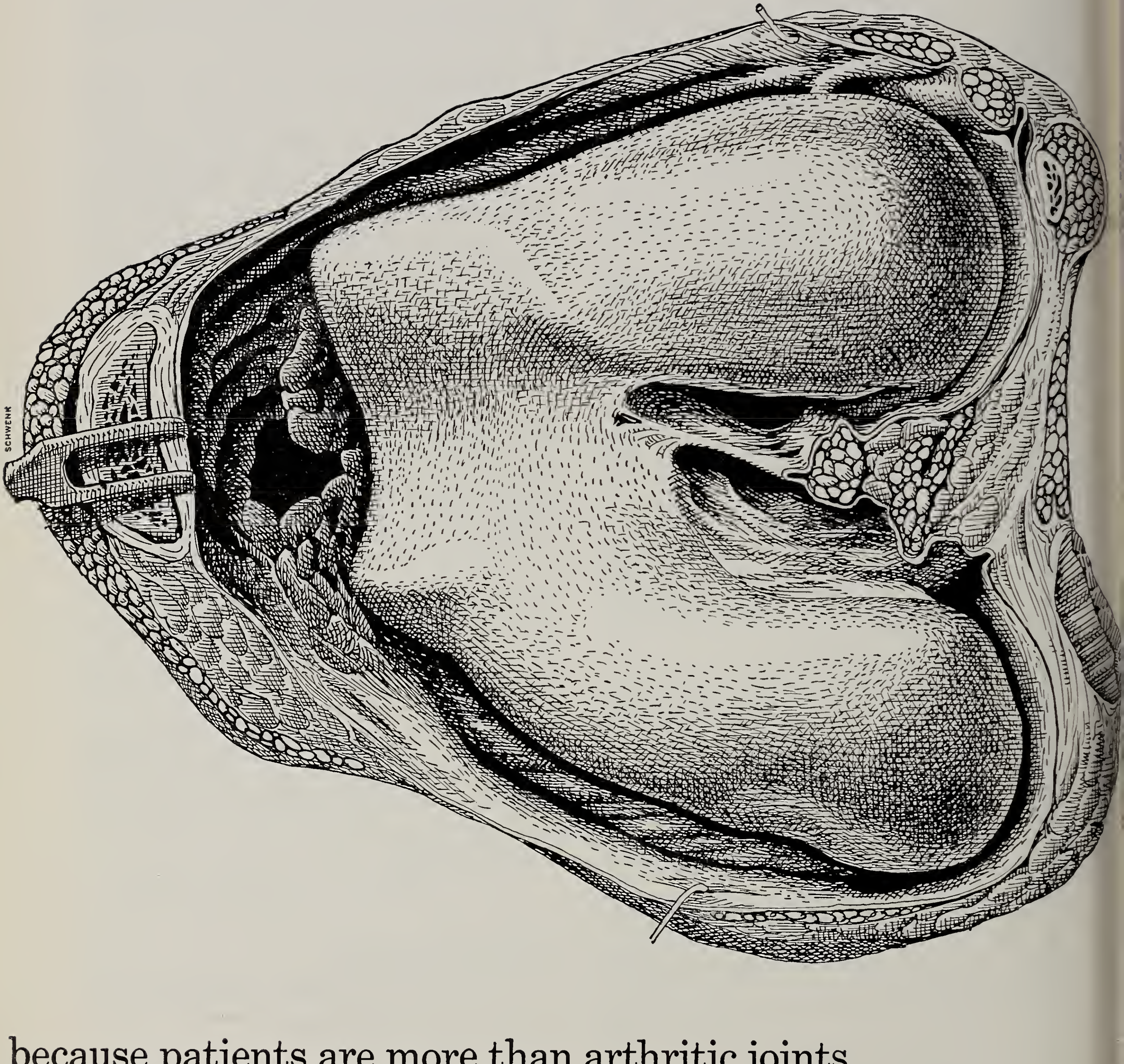
## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### Chariton-Macon-Monroe-Randolph County Medical Society

J. H. Summers, M.D., Lebanon, President of the Missouri State Medical Association, was the

*(Continued on page 437)*



# because patients are more than arthritic joints... controlling inflammatory symptoms is frequently not enough!

Even cortisone, with its severe hormonal reactions, can effectively control inflammatory and rheumatoid symptoms. But a patient is more than the sum of his parts – and the joint is only part of a whole patient. Symptomatic control is but one aspect of modern corticotherapy, because what is good for the symptom may also be bad for the patient.

**Panalba* product information**

*Supplied:* Capsules, each containing Panmycin* Phosphate (tetracycline phosphate complex), equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin,* as novobiocin sodium, in bottles of 16 and 100.

*Usual Adult Dosage:* 1 or 2 capsules three or four times a day.

*Side Effects:* Panmycin Phosphate is well tolerated clinically and has a very low order of toxicity comparable to that of the other tetracyclines. Side reactions are infrequent and consist principally of mild nausea and abdominal cramps.

Leukopenia has occurred occasionally in patients receiving novobiocin. Rarely, other blood dyscrasias including anemia, pancytopenia, agranulocytosis and thrombocytopenia have been reported. In a recent report it was observed that three times as many newborn infants receiving novobiocin developed jaundice as control infants. For this reason, administration of novobiocin to newborn and young infants is not recommended, unless indication is extremely urgent because of serious infections not susceptible to other antibacterial agents.

The development of jaundice has also been reported in older individuals receiving Albamycin. Serious liver damage has developed in a few patients, which was more likely related to the underlying disease than to therapy with novobiocin. Although reports such as the above are rare, discontinuance of novobiocin is indicated if jaundice develops. If continued therapy appears essential because of a serious infection due to microorganisms resistant to other antibacterial agents, liver function tests and blood studies should be performed frequently, and therapy with novobiocin stopped if necessary.

In a certain few patients treated with this agent, a yellow pigment has been found in the plasma. The nature of this pigment has not been defined. There is evidence that it may be a metabolic by-product of novobiocin, since it has been reported to be extractable from the plasma (pH 7 to 8.1) with chloroform while bilirubin is not. These properties have been employed to differentiate the yellow pigment due to the metabolic by-product of novobiocin and bilirubin. However, recent reports indicate that this method of differentiation may be unreliable.

Urticaria and maculopapular dermatitis have been reported in a significant percentage of patients treated with Albamycin. Upon discontinuance of the drug, these skin reactions rapidly disappeared.

*Warning:* Since Albamycin possesses a significant index of sensitization, appropriate precautions should be taken in administering the drug. If allergic reactions develop during treatment and are not readily controlled by antihistaminic agents, use of the product should be discontinued.

Total and differential blood cell counts should be made routinely during the administration of Albamycin. If new infections appear during therapy, appropriate measures should be taken; constant observation of the patient is essential. If a yellow pigment appears in the plasma, administration of the drug should be continued only in urgent cases, and the patient's condition closely followed by frequent liver function tests. In case of the development of liver dysfunction, therapy with this agent should be stopped.

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featured speaker at a dinner meeting of the Chariton-Macon-Monroe-Randolph County Medical Society, Thursday night, March 8, at the Woodland Hospital in Moberly. An excellent family style dinner was served and then Dr. Summers was called upon to address the meeting by the Society's president, Dr. Gretchen Collins, Macon. Dr. Summers used as his topic, "Our Missouri State Medical Association." He pointed out that patients of doctors in the U. S. receive the finest medical care in the world because they have free choice of physician and these physicians are free to study, learn and practice as they best see fit. He warned that if socialized medicine comes in the King-Anderson Bill to those on social security rolls past 65, that the door for complete socialization of medicine for all people in the U. S. will be open. He urged those present to encourage, along with their friends, members of the Missouri State Legislature to fully activate the Kerr-Mills Law in Missouri.

The audience listened attentively.

Secretary Fleming, President Collins, Speaker Summers and Program Chairman Rowlette stop for picture.

Dr. Summers described numerous projects of the Missouri State Medical Association and particularly the Medical Student Loan Program. Following Dr. Summers' well received talk, a general discussion period brought forth additional desirable information. During the business session part of the meeting the Society passed a resolution instructing the delegates to the Missouri State Medical Association to vote for an increase in yearly dues, part of which would be available for loans to medical students through the Missouri State Medical Foundation. It was noted that Dr. F. A. Barnett had been chosen a representative from the second councilor district to the newly formed organization in Missouri called the Missouri Medical Political Action Committee.

Dr. Summers discussed MSMA problems.

Members present were: Drs. F. L. Harms and C. C. Weger, Chariton County; Gretchen Collins, J. E. Campbell, Carl Rinker and Donald Eggleston, Macon County; F. A. Barnett, Monroe County; P. V. Dreyer, J. Will Fleming Jr., Thomas S. Fleming, A. P. Rowlette, C. C. Cohrs, Robert Hasson, L. E. Huber, C. C. Smith, Josephine Baker, Randolph County. Guests present were: Ray McIntyre, Field Secretary of the Missouri State Medical Association, and Dr. Leopold LaChance, Centralia.

J. Will Fleming Jr., M.D., *Secretary*

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1. Hodges, F. T.: *GP* 14:86, Nov., 1956.
2. Guild, B. T.: *Arch. Dermat.* 51:391, June, 1945.

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(1665M)

## SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

### West Central Missouri Medical Society

The March meeting of the West Central Missouri Medical Society was held on the evening of March 8 at the Nevada Country Club. The usual social hour preceded the dinner and the scientific program.

President Don Giesler called the meeting to order and presented Dr. I. M. Thompson, Professor of Urology, University of Missouri Medical School at Columbia, who spoke on "Urological Problems in Our Practices Relating to Kidney and Especially Within the Conduit System." He pointed out several specific conditions in which certain pathologic situations were responsible for some damaging conditions, but because of their nature might appear a minor thing. Among these were the strictures of small meatus in both boys and girls. He had a collection of slides and case histories to bring out these salient points.

Dr. Rolla Wray, Nevada, chairman of the committee on constitution and by-laws, reread the suggestions his committee made at the last meeting on by-laws changes and suggested a raise in Society dues from $15.00 to $25.00. Such a motion was made, seconded and passed.

President Giesler and Dr. Roy Pearse discussed some of the problems which would come up at the state meeting this month in St. Louis. One particular matter discussed was the increase in the Council representation from some of the larger cities. A motion was made that this Society instruct its delegates to vote to keep the Council representation as it now stands. This motion was seconded. The motion carried with Dr. Roy Pearse, however, voting no.

Dr. Rolla Wray, Nevada, read a resolution relating to H.R. Bill 4222. This King-Anderson Bill, if passed, would provide for limited medical care of the aged through social security. The motion that this resolution be mailed to each Senator and Representative from the districts, was seconded and carried by unanimous vote—asking them to do all they can to defeat this measure should it come to a vote.

The meeting was adjourned to meet in April at Harrisonville.

Carter W. Luter, M.D., *Secretary*

1 2 3 4
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1 "significant hearing improvement" occurred with Arlidin in 32 of 75 patients with recent onset hearing impairment due to labyrinthine artery ischemia.

Rubin, W. and Anderson, J. R.: Angiology 9:256, 1958.

3 Arlidin "appears to be one of the most satisfactory [vasodilators], having the advantages of minimal side effects, being well tolerated and possessing a sustained action" in improving circulation of the inner ear.

Seymour, J. C.: Laryngology & Otology 74:133, 1960.

## EIGHTH DISTRICT

DOYLE C. McCRAW, BOLIVAR, COUNCILOR

### Ozarks Medical Society

The regular monthly meeting of the Ozarks Medical Society was held on Tuesday night, March 13, at the Sawyer Restaurant in Mount Vernon. Following a short social hour, dinner was served to a nice turnout of medical society members and their wives and guest speakers.

The scientific program for the evening was on the subject "Upper Gastrointestinal Hemorrhage," This subject was aptly discussed by Carl Almond, M.D., Assistant Professor of Surgery, and Nathan Galloway, M.D., Department of Medicine, both from the University of Missouri Medical School. Dr. Anito, who was Professor of Surgery in Havana and now on the staff at the University of Missouri Medical School, and Dr. Kiphart, a senior resident in surgery from Missouri University, accompanied Drs. Almond and Galloway to the meeting and both contributed to the excellent presentation of the program subject.

The Society is grateful to all of these physicians who flew down from Columbia to discuss an important subject.

J. Lewis Yates, M.D., *Secretary*

## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid Missouri County Medical Society

A dinner meeting of the Mid Missouri Medical Society was held Wednesday night, February 28, at the Munger Moss Cafe in Lebanon. The evening festivities began with a social hour followed by dinner and then the formal program.

Leo T. Neu, M.D., Springfield, gave the scientific talk on "Some Clinical Uses of Radioisotopes." Following his talk, Dr. J. H. Summers, President of the Missouri State Medical Association, presented brief remarks on some of the important problems to be considered at the March Annual Meeting of the State Medical Association in St. Louis.

M. K. Underwood, M.D., *Secretary*

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## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Mineral Area County Medical Society

A meeting of the Mineral Area County Medical Society was held Thursday night, March 8,

2
vascular insufficiency of the labyrinth is an important etiologic factor in sudden perceptive deafness... "vasodilators [Arlidin] are of considerable value."
Wilmot, T. J. and Seymour, J. C.: Lancet 1:1098, 1960.

4
early cases of sudden perceptive deafness should be treated by immediate stellate block "supplemented by the most effective vasodilator drug [Arlidin]... energetic measures to retain blood supply to the inner ear are imperative."
Wilmot, T. J.: J. Laryngology & Otology 73:466, 1959.

in impaired hearing, tinnitus, vertigo...
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Clinical benefit in approximately 50% of cases of recent onset hearing loss treated with adequate vasodilator and other supportive therapy is also reported by Sheehy.
Sheehy, J. L.: Laryngoscope 70:885, 1960.

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in the Clinic Building of the State Hospital in Farmington. The program for the evening, under the auspices of the Missouri Academy of General Practice, presented Richard E. Lord, M.D., St. Louis, Clinical Instructor of Orthopedic Surgery, St. Louis University School of Medicine, who spoke on, "The Care of Open Fractures."

Paul Dennis, M.D., *Secretary*

## CONFERENCE ON HANDICAPPED

The Fifth Conference on the Handicapped will be held at the University of Missouri Medical Center on May 11 and 12. The conference is sponsored by the University of Missouri School of Medicine, Department of Education and Division of Continuing Education, and the Nemours Foundation of Delaware and the Missouri Health Council. The program follows:

*May 11, 1962, 8:45 a.m.*

General Overview of the Problems on the Brain Damage Complex—
  Medical, Dr. George Deaver, Institute of Rehabilitation, New York.
  Vocational Rehabilitation, Dr. C. H. Patterson, University of Illinois.
  Education, Dr. Boyd Sheets, United Cerebral Palsy, New York.
Comprehensive Treatment: Brain Damage Complex, Dr. George Deaver.
Convulsive Disorders, Dr. Dewey Ziegler, Consultant in Neurology, Columbia.
Surgery for Cerebral Palsy—
  The Central Nervous System, Dr. Samuel P. W. Black, Columbia.
  Orthopedic Surgery, Dr. W. David Francisco, Kansas City.
Vocational Rehabilitation for Brain Damaged Clients, Dr. C. H. Patterson.
Educational Research and Progress for the Brain Damaged Child, Dr. Boyd Sheets.

Dinner, Hotel Daniel Boone, 6:30 p.m.

The Interest in the Handicapped and Programs of the University of Missouri, Dr. Elmer Ellis, President of University of Missouri.
Planning the Basic Needs for the Handicapped Child, Dr. A. R. Shands, Medical Director, Nemours Foundation, Delaware.

*May 12, 1962, 9:00 a.m.*

Behavioral Aspects of the Brian Damaged Complex, Dr. Fernando Tapia, Columbia.
Psychological Aspects of Learning With Brain Damaged Child, Dr. Norris Haring, University of Kansas Medical Center, Kansas City, Kansas.
Work Adjustment Problems of the Brain Damaged Clients, Dr. Martin G. Moed, Cerebral Palsy Vocational Rehabilitation, Institute for Crippled and Disabled, New York.
Case Staffing, Chairman, Dr. Clement Brooke, Columbia.
Educational Psychology, Dr. Joseph French, Columbia.
Special Education, Mrs. Ruby Long, Special District, St. Louis County.
School Administrator, Dr. Herbert Schooling, Webster Groves School.
Medical—
  Clinical Psychology, Dr. Rodman P. Kabrick, Columbia.
  Child Psychiatry, Dr. Fernando Tapia, Columbia.
  Speech, Dr. Thelma Trombly, Columbia.
  Educational Testing, Gerald Cain, Columbia.
  Social Service, William Lovata, Columbia.

## DEATHS

**Irland, Robert D.,** M.D., Union Station Hospital, Kansas City, a graduate of Kansas University, 1909; member of Jackson County Medical Society; aged 83; died February 19, 1962.

**Morfit, John C.,** M.D., 7627 Wydown Blvd., St. Louis, a graduate of the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1895; member of St. Louis Medical Society; aged 88; died March 2, 1962.

**Curran, Edward J.,** M.D., Federal Reserve Bank Bldg., Kansas City, a graduate of Harvard University, 1908; member of Jackson County Medical Society; aged 90; died March 4, 1962.

**Parsons, Ernest H.,** M.D., 410 N. Newstead Ave., St. Louis, a graduate of Vanderbilt University, 1930; member of St. Louis Medical Society; aged 57; died March 6, 1962.

**Rose, Frank H.,** M.D., Albany, a graduate of Harvard University, 1919; member of Nodaway-Holt-Atchison-Gentry-Worth County Medical Society; aged 69; died March 6, 1962.

**Vogt, William H.,** M.D., 15 Brookside Lane, St. Louis, a graduate of St. Louis University, 1936; member of St. Louis Medical Society; aged 52; died March 11, 1962.

**Canepa, Francis J.,** M.D., 7215 Northmoor Drive, St. Louis, a graduate of Washington University, 1922; member of St. Louis County Medical Society; aged 66; died March 15, 1962.

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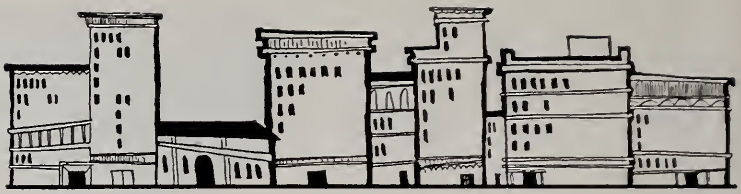
# From the Medical Schools



## ST. LOUIS UNIVERSITY

### Appointment

Dr. Ronan O'Rahilly, Special Fellow of the Public Health Service in the Department of Embryology at the Carnegie Institution of Washington in Baltimore, has been appointed Director of the Department of Anatomy at St. Louis University School of Medicine. His appointment will be effective in September.

Dr. O'Rahilly is currently on leave of absence from Wayne State University, where he has been associate professor of anatomy in charge of histology and embryology for a period of seven years. He joined the Wayne State University anatomy department as an Ainsworth Scholar from the National University of Ireland in 1950. He has spent the last decade there in various teaching and research positions.

In announcing his appointment, Dr. Goronwy O. Broun, Dean, School of Medicine, said Dr. O'Rahilly would complete his commitments at Carnegie Institution by the middle of September. He said Dr. O'Rahilly would make preliminary visits to the School of Medicine to supervise the renovation of space and equipment being used by the department.

Dr. O'Rahilly obtained his medical qualification from the National University of Ireland in 1943, and received his doctorate in anatomy there in 1946. After two years of hospital appointments in England, he became a lecturer in anatomy at the University of Durham and at the University of Sheffield successively. He was awarded his doctor of medicine degree by Wayne University in 1953.

He has contributed to more than 50 professional publications, including joint authorship of a widely used textbook entitled *Anatomy*. Coauthors are Dr. Ernest Gardner, Wayne State University, and Dr. Donald J. Gray, Stanford University. In 1956, Dr. O'Rahilly was consultant to Dorland's Illustrated Medical Dictionary.

Dr. O'Rahilly's research specialty is in the field of embryology. He is particularly known for his work on the embryological development of the osseous system.

He is a member of a number of scientific societies including the American Association for the Advancement of Science, American Association of Anatomists, the Anatomical Society of Great Britain and Ireland, Anatomische Gesselschaft and Association des Anatomistes.

Dr. Kermit Christensen has served as Acting Director of the Department of Anatomy, since the death of Dr. Albert Kuntz in 1957. Dr. Kuntz headed the department for eleven years.

### Founders Week Committee

Dr. Henry E. Oppenheimer has been named chairman of the Medical Alumni activities for Founders Week to be held October 18 to 22.

Dr. William A. Knight Jr., associate professor of internal medicine, has been appointed clinical and academic program chairman and Dr. Louis Keller, associate professor of internal medicine, has been named class reunion general chairman. Appointments were made by Dr. John F. Shaner, president, Medical Alumni Association.

### Alumni Reunion

Dr. Goronwy O. Broun, dean, and Dr. Armand E. Brodeur, associate dean, were hosts at an alumni cocktail party sponsored by the Medical Alumni Association in the Stockholm Room of the Chase Park Plaza Hotel on March 20. The party, held during the meeting of the Missouri State Medical Association, was attended by 200 medical alumni and wives.

Dr. Robert J. Huebner, chief of the laboratory of infectious diseases at the National Institute of Allergy and Infectious Diseases, attended the reunion. A 1942 graduate of the St. Louis University School of Medicine, Dr. Huebner participated in a panel discussion on "Recent Developments in Infectious Diseases, Viruses, Common Colds and Cancer" at the Association meeting.

### Alpha Omega Alpha

Fourteen students at the St. Louis University School of Medicine have been elected to membership in the University's Chapter of Alpha Omega Alpha, national honorary medical society. Elected to membership were four senior and ten junior medical students. They will be

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children (5 to 12 years), from 50 to 100 mg. three or four times daily.
Before prescribing, consult Winthrop's literature for additional information about dosage, possible side effects and contraindications.

*References:* 1. DeNyse, D. L. : M. Times *87*:1512 (Nov.) 1959.
2. Gruenberg, F.: Current Therap. Res. *2*:1 (Jan.) 1960.

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initiated at a banquet to follow the annual Alphonse M. Schwitalla lecture on April 11.

Seniors elected to membership were: Jerome V. Basinski, East St. Louis; Joseph A. Bardenheier III, St. Louis; William M. Cross, Normal, Ill., and David F. Tarmina, San Jose, Calif.

Juniors elected to membership were: Frank H. Corcoran, Webster Groves; Richard D. Garret, Rutherford, N. J.; Sheldon F. Lipson, University City, Mo.; Edward J. Miller, St. Louis; Nick J. Mansour Jr., Superior, Ariz.; James C. Pine, Clifton, Ariz.; August F. Rymut Jr., Morton Grove, Ill.; Bernard T. Swaykus, Steubenville, Ohio; Ronald T. Turgeon, Dover, N. H., and Julian N. Verde, Kansas City, Mo.

Each year a select number of the senior and junior class is approved for candidacy by the officers of the school and elections are made by the active members of the chapter. Membership is based on scholarship, character and personality.

## WASHINGTON UNIVERSITY

### New Medical Center

A 1616-bed medical center to be known as the Washington University Medical School and Associated Hospitals has been created through the establishment of a central board of directors. Included in the agreement are Washington University, Barnes Hospital, Barnard Free Skin and Cancer Hospital, Jewish Hospital and St. Louis Children's Hospital. Also included in the center are McMillan, St. Louis Maternity, Renard and Wohl Hospitals and the David P. Wohl Jr. Memorial-Washington University Clinics, all owned and staffed by the Washington University School of Medicine and operated by Barnes Hospital. The primary purpose of the center is to coordinate the hospital, educational and scientific activities of its member organizations and to provide the coordinated planning of the development of a medical center through voluntary cooperation of its members.

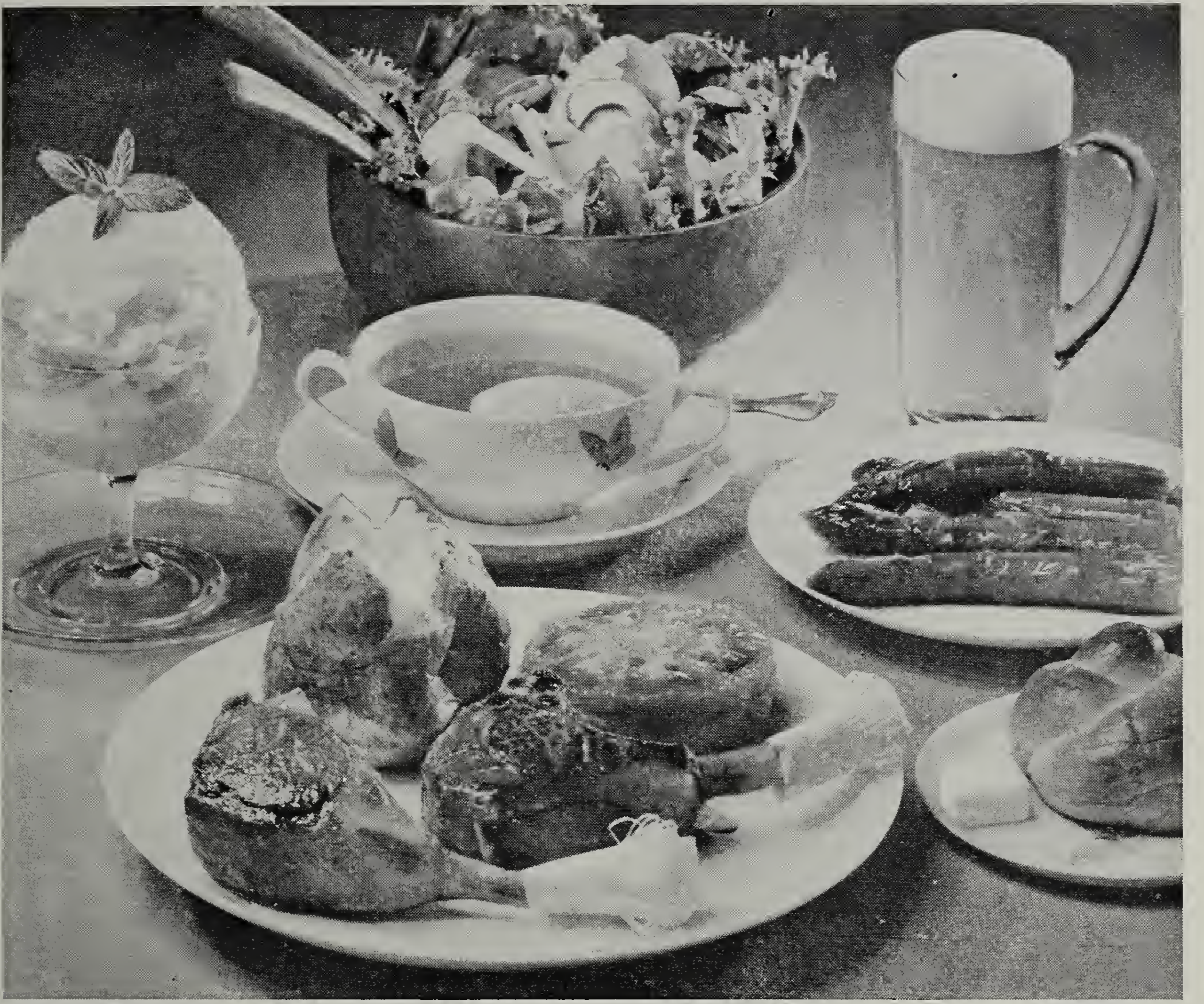
Edgar M. Queeny, chairman of the board of trustees of Barnes Hospital, was elected chairman of the nine member center board, consisting of two members from each unit except Barnard, which has one. Dr. Edward W. Dempsey, dean of the School of Medicine, was named vice chairman. Edward B. Greensfelder, vice president of Jewish Hospital, was elected secretary, and Hugh M. F. Lewis, past president of Children's Hospital, was named treasurer. Other board members are Robert W. Otto, vice chairman of the Barnes board of trustees; John M. Shoenberg, Jewish Hospital; George S. Hecker, president of Barnard Hospital and chairman of its board of directors; Edwin M. Johnston, St. Louis Children's Hospital president and Ethan A. H. Shepley, chairman of the board of directors of Washington University.

The expansion program includes plans for a new 14-story Tower Building which would replace the three-story Barnes Private Pavilion. The program calls also for the construction of parking facilities underground and for extensive renovation of the existing hospitals operated by Barnes Hospital.

### New Psychiatry Head

Dr. Eli Robins has been appointed head-elect of the department of psychiatry and neurology at the School of Medicine. Dr. Robins will succeed Dr. Edwin F. Gildea, who will retire as chairman of the department in July of 1963. At that time, Dr. Robins will also become psychiatrist-in-chief of Barnes, Renard and affiliated hospitals and the Washington University Clinics.

Eli Robins, M.D.



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Dr. Gildea will continue to be Wallace Renard Professor of Psychiatry until 1965 and will use the greater leisure afforded by the new appointment to further his research and for travel. He has headed the department of psychiatry and neurology for 20 years.

Dr. Robins joined the faculty of Washington University School of Medicine in 1949 as U. S. Public Health Fellow in pharmacology and neuropsychiatry, assistant professor of psychiatry, associate professor and in 1958 was awarded a full professorship of psychiatry.

Dr. Gildea, in 1942, was the third to be named head of the department of psychiatry and neurology. In 1943 he initiated the opening of the first inpatient psychiatric service of 54 beds in McMillan Hospital in the Medical Center and, through his efforts, the 100-bed Renard Hospital, psychiatry unit of the school, was constructed in 1953. He was a pioneer in biochemical investigations of psychiatric disorders and in his administration of the department encourages research collaboration with other medical disciplines.

Dr. Robins will continue to expand this work and will emphasize an approach to psychiatry which integrates this specialty more efficiently with the rest of medicine. In the last several years, he has been instrumental in attracting to the department a group of young psychiatrists interested in training in clinical research with patients and in investigative work concerning the physiology and chemistry of the nervous system. He will extend the training program to include more non-psychiatrists with a research interest in mental diseases.

Internationally known for his research in the field of psychiatry and neurology, Dr. Robins has received research support from the National Foundation, National Multiple Sclerosis Society and the United Cerebral Palsy Association, and in 1961, he was among the first in the country to receive a research career award covering full salary from the National Institute of Mental Health.

### Federation Meeting

Twenty-four papers were presented by the faculty of Washington University School of Medicine at the 46th annual meeting of the Federation of American Societies for Experimental Biology held in Atlantic City in mid-April.

Serving as chairman of various sessions were Dr. Sol Sherry, Dr. Jack Strominger, Dr. F. Edmund Hunter, Dr. Albert Roos, Dr. Sarah Luse, Dr. Robert E. Shank, Dr. Oliver H. Lowry and Dr. William W. Sleator.

Speakers and their papers were: Dr. Herman N. Eisen, "Antigenic Determinants of Conjugated Proteins in Relation to Allergic Reactions"; Dr. Anthony P. Fletcher, Dr. Norma Alkjaersig, Dr. Sol Sherry, "Influence of Clot Composition of Thrombolysis in Plasma"; Dr. Wilson A. Heefner, Dr. George D. Sorenson, "Electron Microscope Observations on Experimental Amyloidosis in the Spleen and Lymph Nodes of the Mouse"; Dr. Albert Eisenstein, "Effect of Cortisol on Liver Phosphorylase Activity"; Dr. Robert M. Burton, Yolanda McBride, "Incorporation of D-Glucosamine-1 $C^{14}$ Radioactivity Into Cerebral Glycolipids"; Dr. T. E. Weichselbaum, Harry Margraf, "Identification in Normal Human Blood of Cortisol Acetate and Corticosterone Acetate"; Dr. Phillip Strittmatter, "Direct Hydrogen Transfer From Reduced Pyridine Nucleotides to Cytochrome $b_5$ Reductase"; Dr. Bernard Wortman, Dr. Melvin Freeman, "Resolution of Retinal Mucopolysaccharides by Anion-Exchange Chromatography"; Dr. Stephen Kinsky, "Absorption of Polyene Antibiotics by Mycelia, Protoplasts and Membrane Particles of Neurospora Crassa"; Dr. Gordon Schoepfle, Dr. David B. McDougal, "Metabolic Inhibitors and Nerve Activity"; Dr. Seymour Reichlin, "Effect of Anti-Beef TSH Antibody on Exogenous and Endogenous TSH Activity"; Dr. F. Edmund Hunter, A. Scott, "Relation of Phosphorylation Intermediates and Uncoupling to Swelling of Mitochondria"; Dr. Katsumi Murata and Dr. J. E. Kirk, "Sialic Acid Content of Human Arterial and Venous Tissue"; Dr. Harold Rosenthal and G. O'Brien, "Factors Affecting $Co^{60}$ Cyancobalamin Biding Capacity of Sera From Various Animals"; Max Burger, Dr. Luis Glaser, Dr. Robert M. Burton, "Enzymatic Synthesis of a Rhamnolipid by Extracts of Pseudomonas Aeruginosa"; Dr. Stanley Nathenson, Dr. Jack Strominger, "Enzymatic Synthesis of an N-acetylglucosaminyl-ribitol Linkage in Teichoicacid From S. aureus"; Dr. Norma Alkjaersig, "Purification of Human Plasminogen by DEAE-Sephadix Chromatography"; Dr. Sarah Luse, Neil Kaminsky and Dr. Phyllis Hartroft, "A Comparative Ultrastructural Study of the Adrenal Cortex in the Rat and Dog After Treatment With a Cytoxic Agent"; Dr. Janet V. Passonneau, Dr. Oliver Lowry, "Phosphofructokinase and the Regulation of Glycolysis"; Dr. Carl Frieden, "Coenzyme Binding Sites of Glutamic Dehydrogenase as Measured by Inactivation Studies"; Dr. Helen B. Burch, Dr. Oliver Lowry, P. VonDippe, "TPN + and TPNH in Liver"; Leonard Jarett, "Effect of Glucagon on Dl-Leucine-1-C14 Incorporation Into Protein of Pancreas and Liver"; Dr. Julio Martin, Dr. Paul

E. Lacy, "Prediabetic Period in Partially Pancreatectomized Rats"; Dr. Matthew W. Noall, Dr. France Alexander, Dr. Willard M. Allen, "C19 Sterio Steroid Biosynthesis by Human Ovaries."

### Alumni Day

Alumni Day for Washington University School of Medicine will be held Friday, June 1, with special reunions for the classes of '17, '22, '32, '37, '42, '47, '52 and '57. Dr. C. Barber Mueller, professor of surgery at Upstate Medical Center of New York State University and graduate of the class of '42, will be guest speaker. Dr. Frank Bradley, director of Barnes Hospital, and Dr. Edward W. Dempsey, dean of the Medical School, will discuss the plans for the new medical center. Other faculty members who will speak at the scientific session are Dr. Carl A. Moyer, Dr. Lillian Recant, Dr. Louis T. Byers, Dr. Richard Bradley, Dr. Laurence O'Neal, Dr. Carl V. Moore and Dr. Kaye H. Kilburn. The day will open with a breakfast at 8:30 a.m. in Wohl Dining Room. The business meeting and scientific session will follow in Clopton Amphitheatre.

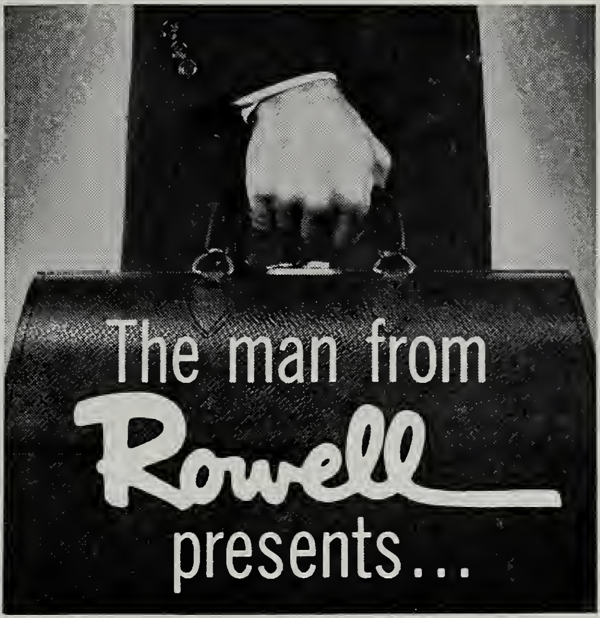
### Faculty Activities

Dr. Neal S. Bricker, assistant professor of medicine, has been named to the new 21-man Scientific Advisory Board of the National Kidney Disease Foundation.

Dr. Margaret Gildea, associate professor of clinical psychiatry, has been named to the Missouri Mental Health Commission. Dr. Gildea is a past president of the Missouri Association of Mental Hygiene and of the St. Louis Society for Neurology and Psychiatry.

Dr. Lauren V. Ackerman, professor of pathology and of surgical pathology, was guest lecturer at the 50th meeting of the John A. Andrew Clinical Society at Tuskegee Institute in April. The clinical society is an inter-racial professional organization devoted to interchange of current ideas and developments in medicine and dedicated to the advancement of medical knowledge. The Tuskegee meetings will be conducted in connection with the J. A. Andrew Memorial Hospital and the Tuskegee Veterans' Hospital.

A special reception was held for friends and associates of the late Dr. Herman Erlanger to view a conference room dedicated in his memory on the fifth floor of the David P. Wohl Jr. Memorial-Washington University Clinics last month. Dr. Erlanger joined the faculty in 1946 and was



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*Rowell's brand of trisulfapyrimidines (equal amounts of sulfadiazine, sulfamerazine and sulfamethazine).

**Side Effects and Contraindications:** As with all sulfas, watch for crystalluria, though this is minimized by Ro-Sulfa formula. Discontinue if exanthemata, urticaria, fever, hematuria, etc., occur. Contraindicated in hypersensitivity to sulfas, chronic glomerulonephritis, pyelonephritis of pregnancy, hepatitis and uremia.

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assistant professor of medicine and preventive medicine at the time of his death in 1959.

## UNIVERSITY OF MISSOURI

### Meetings

Three radiologists on the faculty of the University of Missouri School of Medicine presented lectures at the postgraduate course in radiology based on diseases of the bone held in the auditorium March 7 and 8. The other members of the seminar faculty were guest lecturers from medical institutions in various parts of the country. The University faculty members were Gwilym S. Lodwick, M.D., professor of radiology and chairman of the department, and associate dean of the medical school; Theodore E. Keats, M.D., professor of radiology; and Donald Q. Cochran, M.D., assistant professor of radiology. The seminar was sponsored by the University School of Medicine and the University Continuing Education Service, in cooperation with the Missouri Academy of General Practice.

The Eastern Missouri Branch of the American Society for Microbiology held its annual spring meeting at the University of Missouri Medical Center March 24. Attending the meeting were microbiologists from throughout the state, plus a number of noted guest speakers. Serving as main speaker was Dr. H. R. Cox, well-known researcher in the field of infectious diseases. Dr. Cox spoke first before the Medical Center on March 23 on “Live Virus Vaccines.” “Oral Polio Vaccine” was the subject of his second speech, delivered at the luncheon of the local branch meeting March 24.

### Visitors

Dr. J. R. Battisto, associate professor in the department of microbiology and immunology at Albert Einstein College of Medicine of Yeshiva University, New York City, presented a noon seminar March 5 to the department of microbiology and interdisciplinary faculty group at the Medical Center. The seminar was sponsored by the Medical Center department of microbiology.

Dr. Phillip Gerhardt, professor of bacteriology at the University of Michigan Medical School, presented a lecture on “Ultrastructure of Bacterial Spores” at the Medical Center March 12, as a visiting lecturer of the American Institutes of Biological Sciences. His audience included central Missouri biologists from Central Methodist College, Fayette; Westminster College, Fulton; Lincoln University, Jefferson City; and Drury College, Springfield, in addition to scientists from Columbia.

### Trips and Talks

Paul E. Benoit, assistant professor of anatomy, and Drs. J. W. Goldzieher, Robert Hardy and Robert Le Pere, of the Southwest Foundation for Research and Education, attended a conference March 9 to 12, in San Antonio, Texas, held to assess the results of previous experiments and to determine the future experiments to determine the effects of vagal innervation of the ovary on hormone production.

James T. Barrett, associate professor of microbiology, attended the M. D. Anderson Hospital, University of Texas Symposium March 1 to 3, on the subject of Conceptual Advances in Immunology and Oncology. He also was host to both Dr. P. Gerhardt, and Dr. J. R. Battisto, visitors to the department of microbiology.

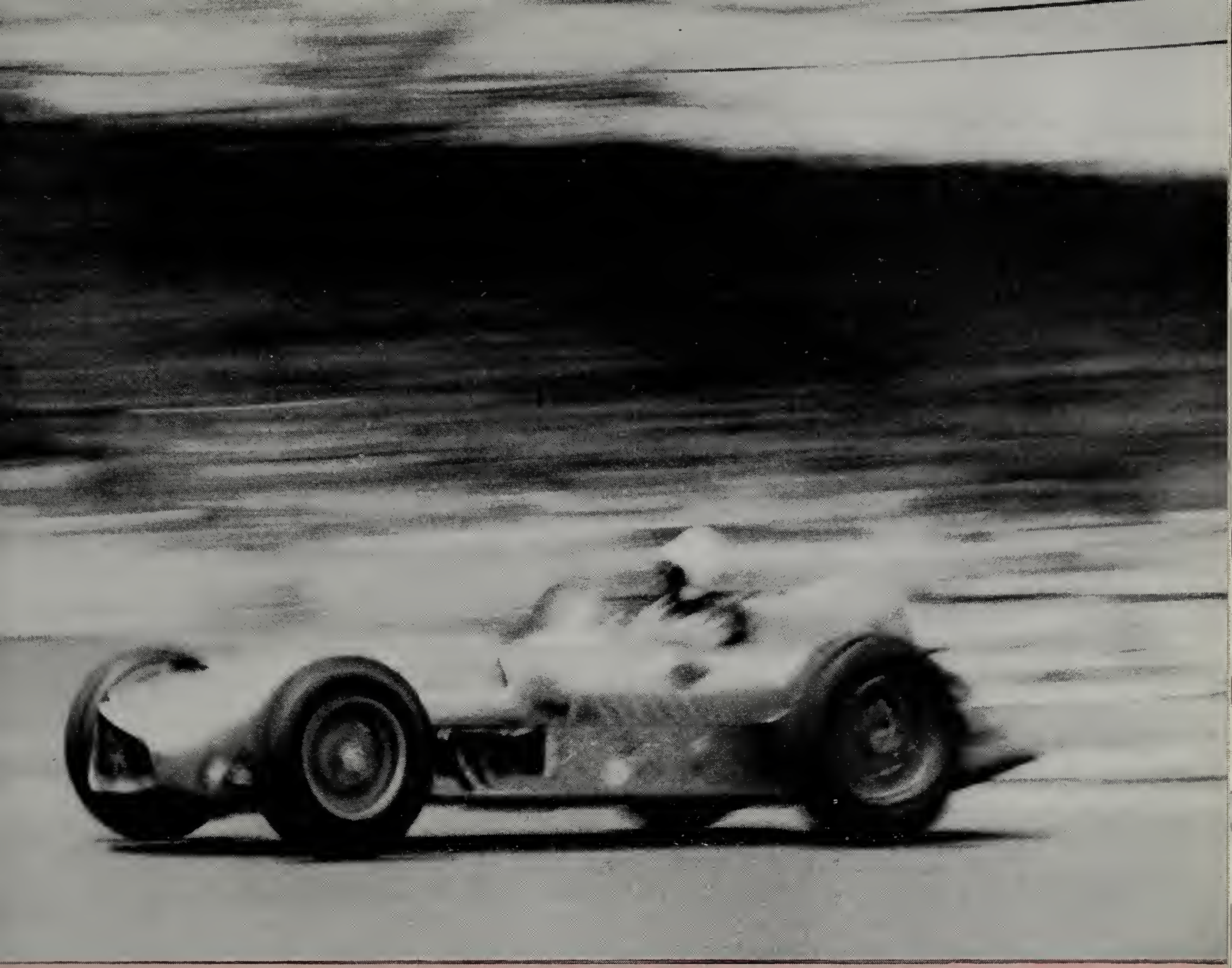
D. P. Durand, assistant professor of microbiology, attended a meeting of the Hickman High School Key Club March 2, to discuss the requirements and opportunities in scientific research to interested high school students for “Career Day.”

Dr. David G. Hall attended a Medical Education for National Defense Program meeting in San Antonio, Texas, March 13 to 21. Dr. Hall is assistant professor and chairman of the department of obstetrics and gynecology.

Dr. M. Pinson Neal, professor emeritus of pathology, served for the year as a member of the standing committee on Scientific and Postgraduate work and was reappointed for a three year term on the same committee at the meeting of the Missouri State Medical Association, March 18 to 21, at the Chase Hotel in St. Louis. Dr. Neal also served as presiding officer for the general session, March 20, and attended the Missouri Medical Alumni Association Annual Luncheon at noon March 20. At the Luncheon, Dr. Neal was presented with a certificate of appreciation for his service to the University of Missouri. He also received a pin as a member of the fifty-year club.

Dr. Clement E. Brooke, associate professor of pediatrics, attended a meeting on pediatrics neurology at the University of Minnesota, February 12 to 14 in Minneapolis. General problems in pediatric neurology were discussed.

Dr. Robert L. Jackson, professor and chairman of the department of pediatrics, spoke on “The Management of the Young Diabetic” at a meeting of the Chicago Medical Society’s Annual Clinical Conference, Feb. 27 to March 2,



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in Chicago. Approximately 350 attended the meeting. Dr. Jackson also attended a meeting of the Massachusetts Institute of Technology and the National Vitamin Foundation in Cambridge, Mass., March 6 and 7. Recent advances in the appraisal of the nutrient intake and the nutritional status of man were discussed.

Dr. George L. Baker, Dr. Harold P. Martin and Dr. Robert J. Harris, assistant instructors in pediatrics, attended a postgraduate medical study on pediatrics at the University of Kansas School of Medicine March 5 and 6. Both scientific papers and case discussions were presented on cardiorenal disorders in children and allergy problems.

Dr. James M. A. Weiss, professor and chairman of the department of psychiatry, was one of a series of speakers presenting to the Pre-Medical Club discussions of various aspects of medical education and practice. The meeting was on the discussion, "What a Psychiatrist Does," held at the Missouri University Student Union February 14. Dr. Weiss traced the history of psychiatry as a medical speciality and related the work of psychiatrists to the general body of medical practice.

Dr. R. S. Froelich, assistant professor of psychiatry, and Dr. Koeppe, professor of biochemistry, attended a meeting of the education committee in Gainesville, Fla., Feb. 28 to March 1, to evaluate the medical school curriculum of the Medical School at the University of Florida.

Dr. Fernando Tapia, assistant professor of child psychiatry, spoke to the Columbia Russell School PTA on the sexual education for children, Jan. 19. The talk was centered on caution against exaggerating the subject and remaining cognizant of the child's total personality, not just his or her sex education. Dr. Tapia also spoke to the Benton School PTA in Columbia, March 15, on "The School and Mental Health." The subject dealt with showing that schools are already involved in problems of personality development and emotional problems. The question is how much more do the schools want to accept as their responsibility.

Dr. Rodman Kabrick, associate professor of clinical psychology, Dr. Tapia, and Mr. William Lovata, social worker, attended the National Meeting of Members of the American Orthopsychiatric Association, in Los Angeles, Calif., March 22. They also attended the 12th annual spring meeting of the Missouri Association of Social Welfare, in Jefferson City, March 17, on "Youth, Partner and Heir in a Changing World." Psychiatry department participation included the discussion of a proposed Juvenile Delinquency Center.

Dr. Samuel P. W. Black, professor of surgery (neurosurgery), attended a pre-medical club meeting March 14, in Columbia. The topic of discussion was neurological surgery.

Dr. John J. Modlin, professor and chairman of the department of surgery, attended the 19th annual meeting of the Central Surgical Association in Cincinnati, Ohio, Feb. 21 to 24.

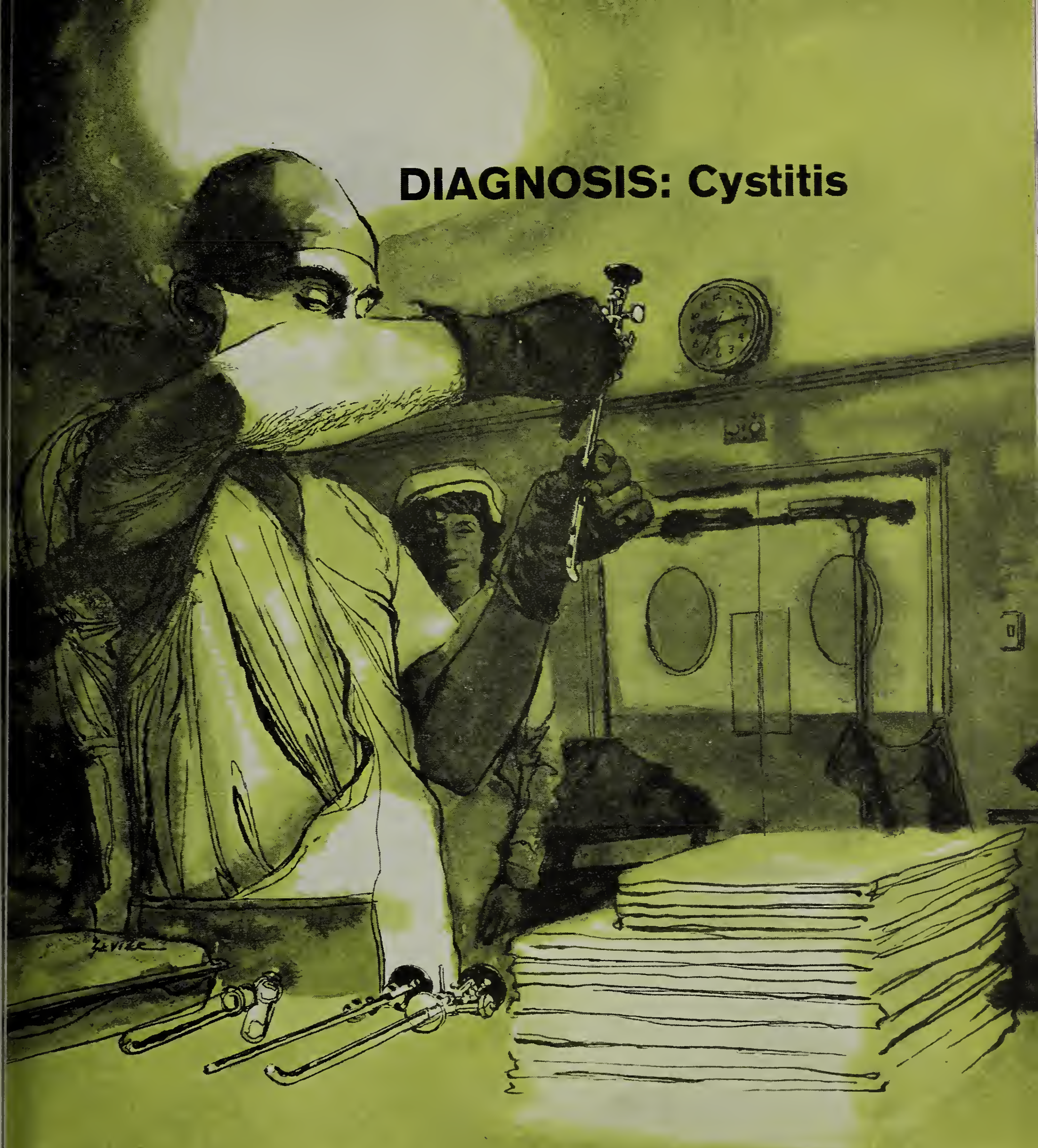
Dr. J. T. Schwartz, assistant professor of surgery (ophthalmology), attended a meeting of the National Academy of Science in Washington, D. C. March 14 and 15. He attended specially a meeting of the Armed Forces Research Council Committee on Vision. Dr. Walter Bass, assistant instructor in surgery (ophthalmology), attended the clinical conference of the Chicago Ophthalmological Society in Chicago, Feb. 16 and 17.

Dr. Hugh E. Stephenson Jr., professor of surgery, attended the 19th annual meeting of the Central Surgical Association in Cincinnati, Feb. 22 to 24. Dr. John H. Landor, assistant professor of surgery, and Dr. James L. Ross, assistant instructor in surgery, also attended the meeting.

Dr. John C. Schuder, associate professor of surgery (biophysics), made a TV appearance with Mr. Warson Dersham, executive director of the Missouri Heart Association, March 22, to discuss the research project (energy transport for artificial heart) supported in part by the Association.

James W. Mackenzie, M.D., thoracic surgeon, University of Michigan Medical Center, visited the department of surgery Feb. 19 and 20. On March 5 and 6, the department was visited by Homer Kimmich, M.D., otolaryngologist from Springfield, Ill., and Andrew Miller, M.D., orthopedic surgeon from Nashville, Tenn.

Charles Roper, M.D., thoracic surgeon from St. Louis, was a guest of the department of surgery on March 8 and 9, and on March 12 and 13, August Mueller, Ph.D., research associate in zoology from the University of Wisconsin was a departmental guest. Robert E. Lee Berry, professor of surgery, Michigan, was a visiting professor of surgery March 12 to 14.



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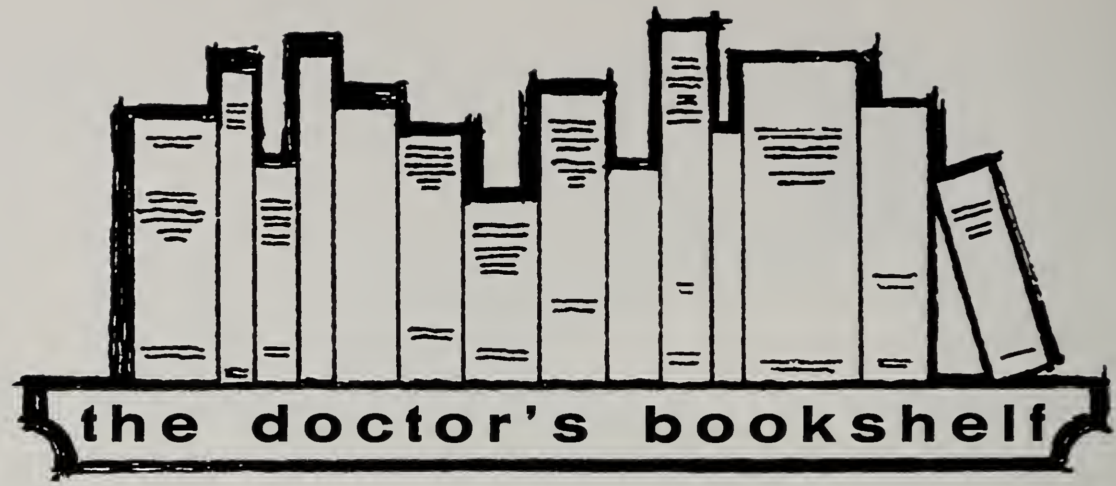

## BOOK REVIEWS

Light Coagulation, by Gerd Meyer-Schwickerath, M.D., Chief, Municipal Eye Clinic, Essen, Professor of Ophthalmology, University of Bonn. The C. V. Mosby Company, 1960, St. Louis. Price: $9.50.

This book has the preeminence of being written by the original investigator and clinical user of photocoagulation. After three years of experimental work, the first light coagulation was successfully carried out in human beings in the spring of 1949. During this first year only seven patients were treated, but with clinical experience as well as perfection of instrumentation and technics the indications for photocoagulation increased markedly so that by 1959 more than 700 patients had received light coagulation. With this background for a new modality in treatment, the author's first approaches to the problems involving experimentation with light coagulation, viz: the physical aspects of light coagulation, the results of photocoagulation on animal retinas and finally on humans, form an interesting and stimulating historical and experimental background of radiation damage to the retina.

The course of development of the instrumentation from its first speculation to its eventual evolution from solar energy, through Becks carbon arc, and finally the high pressure Xenon lamp is pointedly and interestingly evolved. The present clinical instrument is tersely but adequately described. Then the exact method of use of the photocoagulation instrument is precisely outlined in chronological order from the outset of starting and focusing the lamp to its direction of use on the desired site.

In succinct fashion the examination and preparation of the patient, general rules for carrying out light coagulation, indications, contraindications, limitations and complications of light coagulation are all adequately elicited. Histories of some graphic cases having received photocoagulation with a few accompanying photographs furnish the practical aspect of this book for the general ophthalmological practitioner. For the ophthalmologist especially interested in retinal surgery this book is indispensable. S. K.

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Memoirs of a Medico, by Dr. E. Martinez Alonso. Doubleday & Company, Inc., Garden City, New York, 1961. Price: $4.50.

Doctor Alonso has written an interesting autobiography of an adventurous life. He was born in Spain where he spent his early childhood. At the age of 8 his father, who was Uruguayan Consul, was moved to Glasgow, Scotland, so that Dr. Alonso received most of his education in Glasgow and Liverpool where he qualified in medicine. When he returned to Spain, through family connections he met Queen Ena, and was able to obtain appointment to the Red Cross Hospital which was a desirable post. However, Spain was in political upheaval; the Royal Family abdicated, and civil war followed. Dr. Alonso managed to serve in both Republican and Loyalist hospitals. His view of the civil war as seen from both sides is brutally appalling. At one time he barely escaped death by a firing squad. The hospitals were poorly equipped and he had to improvise frequently. He was one of those who used the closed plaster technic for fractures and osteomyelitis.

After the war Spain was upset, and he returned to England where he served in British hospitals through most of World War II. During

*(Continued on page 458)*

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in the "frantic forties"—For many patients in their "frantic forties," the pace never slackens—may even accelerate—while tensions multiply and physical resources dwindle. Out of this seedbed of stresses and anxieties grow much of the alcoholism, psychosomatic illness, and sympathetic overactivity of the middle years.

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In the emergent situation, VISTARIL, administered parenterally, is a valuable aid to the physician in managing patients who escape psychic conflict via alcohol. According to Weiner and Bockman,[2] who obtained beneficial results in 81% of 175 patients studied, hydroxyzine (VISTARIL) may well be considered a tranquilizer of choice in the management of the acutely agitated alcoholic.

1. King, J. C.: Int. Rec. Med. 172:669, 1959. 2. Weiner, L. J., and Bockman, A. A.: Sci. Exhibit, A.M.A., Ann. Meet., New York City, June 26-30, 1961.

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**See "IN BRIEF" on the next page**

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VISTARIL, hydroxyzine pamoate (oral) and hydroxyzine hydrochloride (parenteral solution), is a calming agent unrelated chemically to phenothiazine, reserpine, and meprobamate.

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**INDICATIONS:** VISTARIL is effective in premenstrual tension, the menopausal syndrome, tension headaches, alcoholic agitation, dentistry, and as an adjunct to psychotherapy. It is recommended for the management of anxiety associated with organic disturbances, such as digestive disorders, asthma, and dermatoses. Pediatric behavior problems and the emotional illnesses of senility are also effectively treated with VISTARIL.

**ADMINISTRATION AND DOSAGE:** Dosage varies with the state and response of each patient, rather than with weight, and should be individualized for optimum results. The usual adult oral dose ranges from 25 mg. t.i.d. to 100 mg. q.i.d. Usual children's oral dose: under 6 years, 50 mg. daily in divided doses; over 6 years, 50-100 mg. daily in divided doses.

Parenteral dosage for adult psychiatric and emotional emergencies, including acute alcoholism: I.M.—50-100 mg. Stat., and q.4-6h., p.r.n. I.V.—50 mg. Stat., maintain with 25-50 mg. I.V. q.4-6h., p.r.n.

**SIDE EFFECTS:** Drowsiness may occur in some patients; if so, it is usually transitory, disappearing within a few days of continued therapy or upon reduction of dosage. Dryness of mouth may be encountered at higher doses.

**PRECAUTIONS:** Drowsiness may occur in some patients. The potentiating action of hydroxyzine should be taken into account when the drug is used in conjunction with central nervous system depressants. Do not exceed 1 cc. per minute I.V. Do not give over 100 mg. per dose I.V. Parenteral therapy is usually for 24-48 hours, except when, in the judgment of the physician, longer-term therapy by this route is desirable.

**SUPPLIED:** VISTARIL *Parenteral Solution* (hydroxyzine hydrochloride)—10 cc. vials, 25 mg. per cc. and 50 mg. per cc.; 2 cc. ampules, 50 mg. per cc. VISTARIL *Capsules* (hydroxyzine pamoate)—25, 50, and 100 mg. VISTARIL *Oral Suspension* (hydroxyzine pamoate)—25 mg. per 5 cc. teaspoonful.

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this time he became interested in chest surgery. On his return to Spain he set up practice in Madrid, and when the new Hilton Hotel was built, he became hotel physician. He apparently had a good knowledge of English and French, which, no doubt, was of considerable help.

From his experience as a hotel physician, he gathered many amusing stories. He has interesting comments on penicillin and morals, on alcoholism, movie actresses, bull fighting, flamenco dancing and tourists.

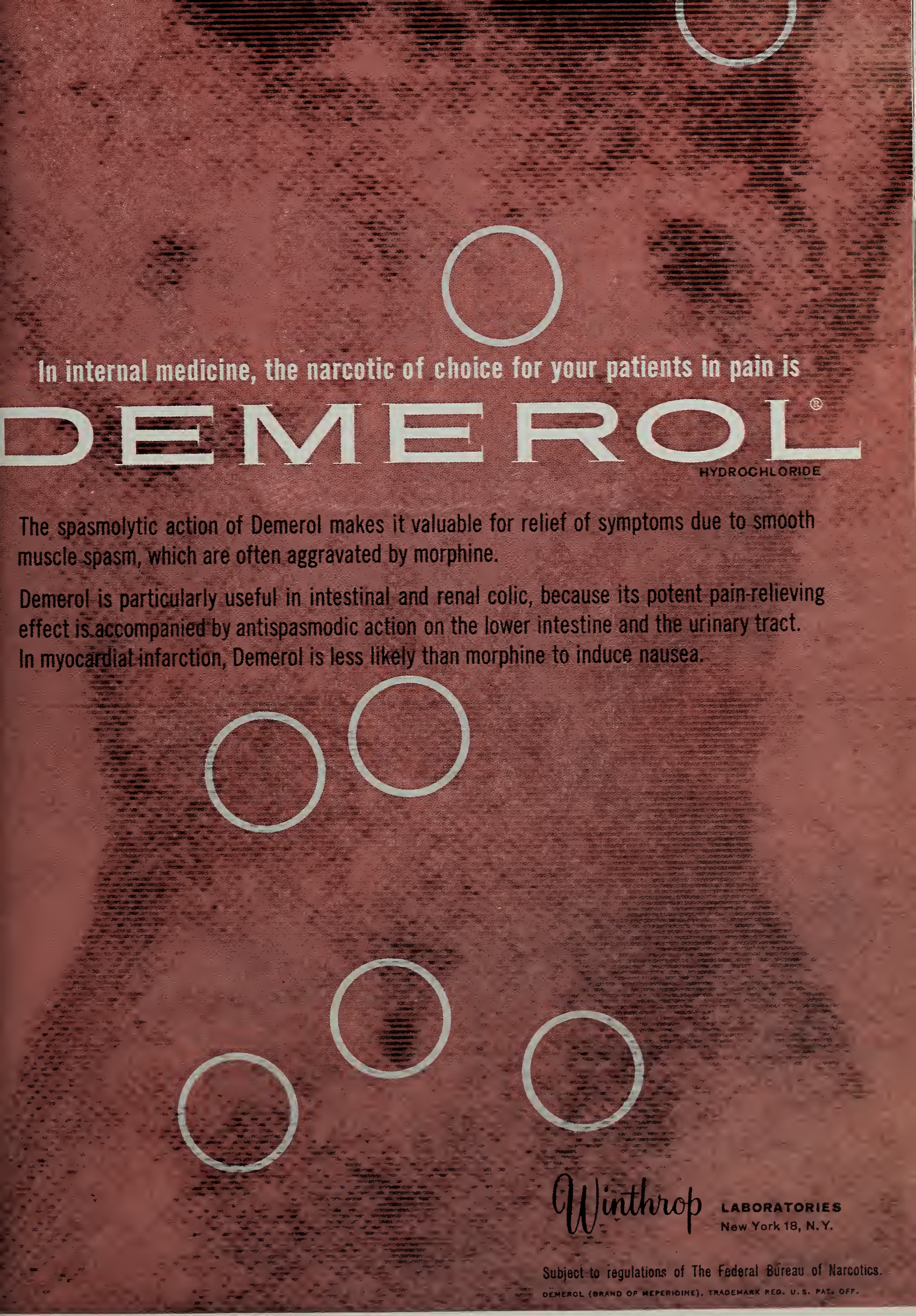
The book lacks a table of contents, and there is no index. One looks in vain for the date of Doctor Alonso's birth, or for any mention of his courtship and marriage, although the book is dedicated to two daughters. At times one is reminded of Washington Irving's comments on travel in Spain, but the book is well written and worth reading. B. S. P.

Appraisal of Current Concepts in Anesthesiology, edited and assembled by John Adriani, M.D., Professor of Surgery, Tulane University School of Medicine, New Orleans, La.; Clinical Professor of Surgery and Pharmacology, Louisiana State University School of Medicine, New Orleans, La.; Director, Department of Anesthesiology, Charity Hospital of Louisiana, New Orleans, La., The C. V. Mosby Company, St. Louis, 1961. Price: $7.75.

Most physicians discover that maintaining contact with medical periodicals is a constant and frequently a futile effort. A book entitled, "Appraisal of Current Concepts in Anesthesiology," by Dr. John Adriani, one of the most highly respected senior anesthesiologists in this country, offers a chance to review, evaluate and catch up in this field.

Containing 45 succinct chapters covering a wide range of subjects of interest to those with some background in anesthesia or surgery, the book uniquely fills a gap, as the author says, between medical periodicals and textbooks. Some of the material is "old" for periodicals, but too "new" to have been included in standard textbooks. It is comprised of a number of reviews of topics selected for study by members of the Anesthesia Department of Charity Hospital as part of the training program. Each section contains a review of the early thinking and background of the subject plus a summary of the current concepts and thinking appearing in journals during the last several years.

The stature of the editor assures that the work is authoritative and may be used as a reference point in subjects such as, "Shock and Anesthesia," "Sterilization of Spinal Anesthesia Drugs," "Ad-



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hesive Arachnoiditis," "Water Intoxication in Urologic Surgery," and "Relation of Emphysema to Anesthesia."

Any medical library used by physicians having any connection with surgery will be better off with this book on its shelves.

One may hope that sometime in the future when he thinks it propitious that Dr. Adriani will collect, edit and publish another such compendium. E.O.K.

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## NEWER DEVELOPMENTS IN CANCER

"Newer Developments in Cancer" will be the subject of the University of Missouri School of Medicine's spring clinical conference, to be held at the Medical Center, Columbia, May 9 and 10. Registration will open at 8:30 a.m. and greetings will be presented by Vernon E. Wilson, M.D., Dean of the School of Medicine. The program follows:

*Wednesday, May 9*

9:30 a.m. Viral Aspects of Cancer, Robert J. Huebner, M.D., Bethesda, Md., Chief, Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Department of Health, Education and Welfare.

10:30 a.m. Antibody Response to Cancer, William T. Newton, M.D., St. Louis, Director, Surgical Service, Washington University School of Medicine.

11:30 a.m. Panel: Host Response to Cancer. Moderator, William D. Mayer, M.D., Columbia, Assistant Professor of Pathology. Panelists: Dr. Newton, Dr. Huebner, A. McChesney Evans, M.D., Columbia, Assistant Professor of Medicine; Solomon Garb, M.D., Columbia, Associate Professor of Pharmacology.

1:30 p.m. Newer Developments in the Surgical Management of Cancer, Danely Slaughter, M.D., Chicago.

2:30 p.m. Growth Rates of Tumors, John S. Spratt, M.D., Columbia, Assistant Professor of Surgery.

3:30 p.m. Panel: Modern Concepts of the Treatment of Melanoma. Moderator, John J. Modlin, M.D., Columbia, Professor and Chairman of the Department of Surgery. Panelists: Carl H. Almond, M.D., Columbia, Assistant Professor of Surgery; Richard E. Johnson, M.D., Columbia, Clinical Associate Professor of Pathology; Dr. Slaughter.

*Thursday, May 10*

9:00 a.m. Irradiation of Cancer as Definitive Treatment, William T. Moss, M.D., Chicago.

9:45 a.m. Palliative Radiotherapy of Cancer, Malcolm A. Bagshaw, M.D., Palo Alto, Calif., Assistant Professor of Radiology, Stanford University School of Medicine.

11:30 a.m. Panel: Combined Approach to Cancer Therapy. Moderator, Jose M. Sala, M.D., Columbia, Associate Professor of Radiology. Panelists: John F. Lowney, M.D., Columbia, Assistant Professor of Medicine; John H. Landor, M.D., Columbia, Assistant Professor of Surgery; Dr. Moss and Dr. Bagshaw.

1:30 p.m. Case Presentations: Problems of Bladder Tumors. Moderator, Fred V. Lucas, M.D., Columbia, Professor and Chairman, Department of Pathology. Panelists: Ian M. Thompson, M.D., Columbia, Professor of Surgery (Urology); John F. Porterfield, M.D., Columbia, Assistant Instructor in Pathology; Frank J. Davenport, M.D., Columbia, Assistant Professor of Pathology; A. T. K. Cockett, Capt., USAF, MC, Brooks Air Force Base, Texas, Chief, Experimental Surgery Branch, School of Aerospace Medicine; F. Ceccarelli, Major, USA, MC, Fort Sam Houston, Texas, Assistant Chief of Urological and Surgical Research Laboratories, Brooke Army Hospital.

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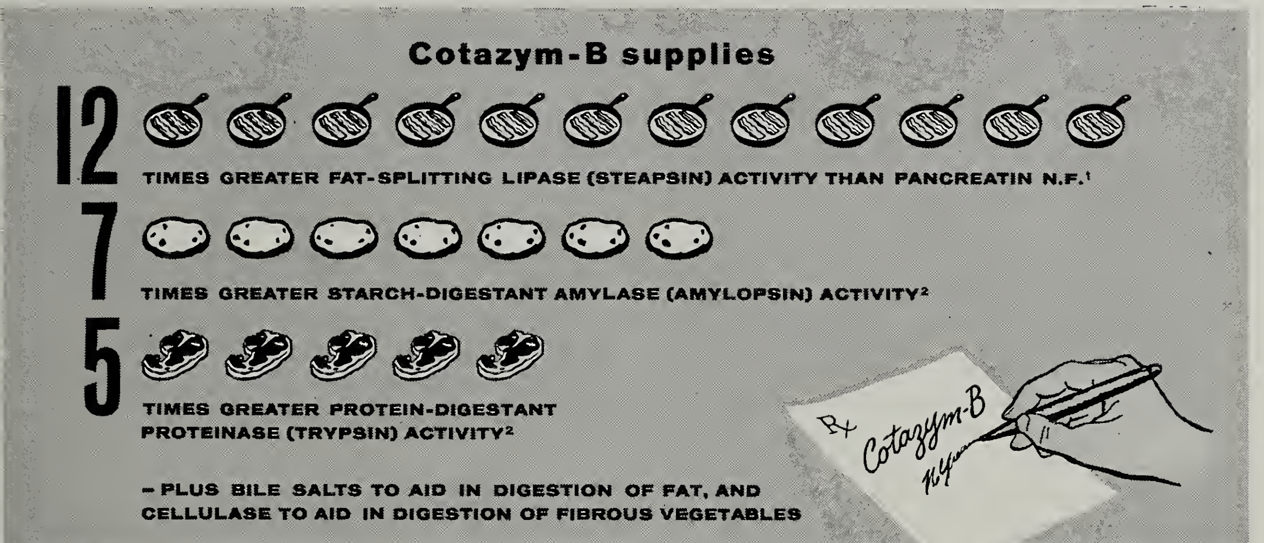

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# Missouri Medicine in Review

## FORTY YEARS AGO

There were fewer members registered at the 65th annual meeting held in Jefferson City May 2, 3 and 4, than at any other meeting of the Association in recent years, the registration being 198. The principal reason for this low registration is undoubtedly the proximity of the annual session of the American Medical Association at St. Louis. The elevation of Dr. A. R. McComas to the presidency from chairman of the council was universally approved.

It is worthy of honorable mention that the City of St. Louis by almost the unanimous vote of its Board of Aldermen, authorizing the sale of dogs from the city pound to the reputable medical schools of the city, has not only refused to tolerate antivivisection, but has come to the aid of physicians in the fight against disease and in the training of doctors. This step is no small one for the municipality to have taken, in the light of the fact that only a few years ago the money subscribed for antivivisection in England was more than twice the amount given for the advance of medicine.

## TWENTY-FIVE YEARS AGO

The twenty-first annual session of the American College of Physicians, which convened in St. Louis April 19 to 23, brought many noted clinicians to St. Louis. Approximately 2,100 physicians attended the meeting.

The American Board of Ophthalmology will conduct an examination in Philadelphia on June 7 and in Chicago on October 9. Dr. John Green, St. Louis, is secretary of the Board.

Rev. Alphonse M. Schwitalla, S.J., dean, St. Louis University School of Medicine, will present an address on “The Child and the Physician” at a public health meeting to be held in St. Paul, Minnesota, on May 4.

A Drinker Respirator for use with nonambulatory patients was recently purchased by the University Hospitals of the University of Missouri, Columbia, the only respirator for use in the state except in Kansas City and St. Louis.

The St. Louis Medical Society celebrated its hundredth anniversary on April 5, 6 and 7 with sessions at the St. Louis Medical Society Building on the first two evenings and a banquet at the Jefferson Hotel on the last evening. Between 500 and 600 attended each session and more than 1,000 attended the banquet.

## TEN YEARS AGO

The Missouri State Medical Association, founded in 1850, held its 94th Annual Session at Hotel Jefferson, St. Louis, March 30 through April 2, 1952, with 1,552 persons registered for the meeting. J. W. Thompson, M.D., St. Louis, was installed as President. Officers elected were: E. Claude Bohrer, M.D., West Plains, President-Elect; Clinton W. Lane, M.D., St. Louis; P. T. Bohan, M.D., Kansas City, and J. Will Fleming, M.D., Moberly, Vice Presidents; H. E. Peterson, M.D., St. Joseph, Secretary; C. E. Hyndman, M.D., St. Louis, Treasurer; Victor B. Buhler, M.D., Kansas City, Chairman of the Council.

Peter G. Danis, M.D., St. Louis, presided as chairman of the Committee on Hospitals and Dispensaries of the American Academy of Pediatrics which held a two day meeting in St. Louis March 7 and 8.

On Tuesday evening, April 8, the Ozarks County Medical Society held a dinner meeting at the Park Casino, Monett, with the lawyers of the five counties which compose the Society as guests. Mutual problems confronting the two professions were discussed by designated members of the legal profession present and by W. S. Sewell, M.D., Springfield, Councilor of the Eighth Councilor District.

# Curiosa et Trivia

**WILLIAM B. McCUNNIFF**

About seventy-five thousand power mower accidents occur in the U.S. annually. The vast majority are caused by contact with a rotary blade, and are largely preventable by the use of safety shoes. The remainder, caused by flying objects, are reportedly avoided by the use of an "S" shaped blade. Sources available on request.

---

If the paregoric concession isn't already signed up, an opening should be available for readers of a recent journal which recommended ". . . a grain of Colchicine daily . . ." in the treatment of gout. Aside from the inevitable other activities, this would entail taking one 1/100 grain tablet every fourteen minutes.

---

Now hear this: obstetricians may now legally treat male patients. Official from the Advisory Board for Medical Specialties.

---

Wyatt Earp notwithstanding, a shotgun is at least twice as lethal a weapon as any other type of firearm. But beyond seven yards, the pellets usually penetrate only to the deep fascia.

---

Thin plastic film dry cleaning bags, still in use, accounted for 114 deaths in 1960.

---

Over half a million children swallow household aids per year, and about 500 die. Yet Vermont, Montana, and the District of Columbia do not have poison control centers.

---

Consider the plight of the veterinary surgeon or pathologist who must take care of an elephant with a 600 pound skull, 56 pound heart, 300 pounds of lung, and a 235 pound liver. And yet, consider the opportunity for their fellow dermatologist who finds his patient has forty square yards of skin; or the enigma of the urologist confronted with a patient whose testis weigh twenty pounds, the penis almost seventy pounds . . . and whose spermatozoa are smaller than man's.

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# WASHINGTON

## New Army Study Refutes Unfit Theory

The department of the Army, in a report released April 10, states that two of every three Americans qualify for military duty.

Sixty-eight per cent of the American youths liable for military duty during recent years have been qualified for service in the Armed Forces, according to a study covering the post-Korean War period just published by the Army Surgeon General's Office.

This compares with 76 per cent that were qualified during the Korean War. Part of the decline in the percentage of youths acceptable has been due to the raising of the mental standards in 1958—a change that decreased the draftees' qualification rates by some 6 per cent.

Of the 32 per cent of the total manpower pool not qualified for service in recent years, only about half have been turned down for medical reasons. The remainder either failed the mental tests or were rejected for administrative (primarily moral) reasons.

The study, prepared by Bernard D. Karpinos, Ph.D., of the Medical Statistics Divisions, is the first to analyze the results of the examinations of all segments of the youth population liable for military service, and includes data not only for draftees but also for those who voluntarily enlisted in the Armed forces.

The study covers from August 1953 through June 1960, and is divided into two periods—from August 1953 through July 1958, and from August 1958 through June 1960. This split was made because the mental standards were raised in August 1958, when Army Classification Battery tests were added to the existing Armed Forces Qualification Test.

A comparison of the data for draftees with that for voluntary enlistees in the 1958-1960 period shows a striking difference in the percentage of each group qualified for service. Only 49 per cent of the draftees were found acceptable as compared with 93 per cent of voluntary enlisted that were qualified for military duty.

Previously published studies that dealt exclusively with the results of the examinations of draftees have been, "grossly and quite misleadingly—misinterpreted," according to the study.

"Much concern has been expressed of late about the 'physical fitness' of American youth," the study continues. "The disqualifications of youths for military service has been widely quoted in this connection as corroborative evidence."

The study lists four points that have been overlooked in interpreting the previously published data:

1. Quoted data have been limited to draftees, who represent only a part of the total manpower pool liable for military service. Draftees are a residual group consisting largely of youths who cannot qualify for either regular enlistment or enlistment in the various reserve programs, or who have known disqualifying defects and do not try to enlist.

2. Disqualifications have commonly been taken to represent medical disqualifications alone, disregarding the fact that they also include disqualifications for administrative reasons and for failure to pass mental tests. The proportion of disqualification for failure of the mental tests is about as large as that for medical reasons.

3. The assumption that all the medically disqualified youths can be rehabilitated, or that their disqualifying conditions could have been prevented through an exercise program. Such an assumption is hardly justifiable without making a diagnostic evaluation of the specific causes of disqualification. Certain disqualifying defects, such as hernias, punctured eardrums, or diabetes could hardly be remedied by such programs.

4. The failure to recognize that a medical evaluation for military service and an evaluation for fitness based on physical fitness tests are two different types of evaluations. Many "physically fit" youths are not medically qualified for military service—many nationally known professional athletes provide such examples. On the other hand, many youths who are qualified for military service would rank low on a physical fitness test.

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Across
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### "Free Medical Care Just Isn't"

The following editorial appeared in the April issue of the *Missouri Farm Bureau News* and is reprinted with permission.

Social security taxes should not be increased to pay medical costs for any portion of the population. The need for medical insurance should be met by expansion of existing private insurance programs without federal subsidy or intervention.

A recent survey, conducted by the Opinion Research Corporation of Princeton, N. J., showed that 80 per cent of the American people do not favor an increase in taxes to pay doctors' salaries. It seems in the same breath, these same people would not want to pay higher taxes to finance the care program. There is no such thing as "free" medical care—and politicians should not use this word to deceive the people.

Every penny the government spends comes out of the taxpayer's pocket. Therefore, it is highly improper to imply that any health program is "free." The government can't build a highway, a boat, or a bomber without dipping into the taxpayer's pocketbook. It cannot provide free medical care.

A spokesman for the American Academy of General Practice remarked that if Congress passes the controversial King-Anderson Bill providing care for the aged under social security, it will mean that people under 75 will be paying for medical care received by people over 65. Then, the next step would be to drop the age requirements and enact pure, unadulterated socialized medicine.

When this happens, he continued, taxes will go up again, and everyone will be paying for medical care—to say nothing of the huge bureaucratic machinery necessary to administer and police the program—whether he wants and needs it or not.

### New Mental Health Program Proposed

Dr. George A. Ulett, Acting Director of the State Division of Mental Diseases, addressed the Kansas City Mental Health Association, April 30. He proposed the establishment of three intensive, short stay admitting hospitals in St. Louis, Columbia and Kansas City, each having 100 to 150 beds.

Dr. Ulett said: "The establishment of a system of admitting hospitals across Missouri would give every patient from all parts of the state opportunity for a period of optimal care at the onset of his illness and at a time when such treatment can be most effective.

"Such admitting centers are Missouri's best chance for beating the problem of chronic mental illness. If we can attract 20 or 30 doctors into the Missouri State Hospital system, and there are more than this number in resident training in Missouri today, we could deploy them among three small admitting hospitals and have the doctor-patient ratio that is needed for the kind of job that an intensive treatment center should do.

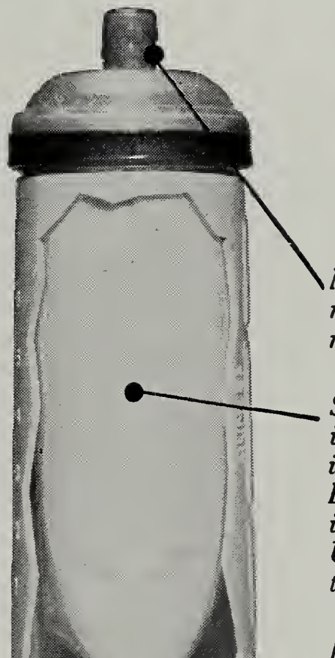
"If this same number of positions were distributed through Missouri's five large state hospitals, the small reduction in patient load per doctor they accomplish would not permit this type of intensive treatment program."

# dramatically reduces spitting up and colic

To the members of the medical profession who recognize the advantages of breast feeding—here's a completely new concept in baby feeding that all doctors will welcome. The new Playtex Nurser. It features a soft, pre-sterilized inner bottle which is disposable, and a broad, non-collapsing nipple which produces a sucking action similar to that in breast feeding.

Because the outside atmospheric air pressure contracts the soft inner bottle, the formula is withdrawn more naturally than with conventional rigid baby bottles. There is no vacuum formation to set up air blocks. The natural-action nipple induces sucking which makes for less air swallowing, and less spitting up—and in so doing, promotes the healthful mouth-jaw exercises the mother's breast provides.

Colicky infants, problem feeders and premature babies especially will benefit from the breast-like action of the new Playtex Nurser. The fact that the bottle is pre-sterilized and disposable will appeal to mothers who do not breast feed their babies. The fact that the Nurser does so closely simulate breast feeding will be similarly important to the health of any baby fed with it.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(Cut-out View)

*"Nature's Way"*

**PLAYTEX NURSER**

*"The nearest approach to breast feeding"*

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C. G. STAUFFACHER, M.D., Secretary

# Missouri Academy of General Practice

The program of the 14th Annual Scientific Assembly of the Missouri Academy of General Practice to be held in St. Louis at the Chase Hotel, Saturday and Sunday, November 3 and 4, is rapidly moving into completed form. Some out-of-state guest speakers are: E. A. Hines Jr., M.D., Consultant in Cardiovascular Diseases to the VA Hospital at Oteen, North Carolina, Emeritus Consultant of the Mayo Clinic and Emeritus Professor of Medicine, Mayo Foundation Graduate School, University of Minnesota; Thomas F. Nealon Jr., M.D., Associate Professor of Surgery, the Jefferson Medical College of Philadelphia; Arthur L. Haskins, M.D., Professor and Head of the Department of Obstetrics and Gynecology, University of Maryland School of Medicine; Charles V. Heck, M.D., Clinical Assistant Professor of Orthopedic Surgery at the University of Illinois College of Medicine; and Emil D. W. Hauser, M.D., Associate Professor of Orthopedic Surgery, Northwestern University Medical School.

Instate guest speakers include: Daniel L. Sexton, M.D., St. Louis; K. B. Coldwater, M.D., St. Louis; Carl A. Moyer, M.D., St. Louis; Ian M. Thompson, M.D., Columbia; Carl M. Fellhauer, M.D., St. Louis; and Cyril M. MacBryde, M.D., St. Louis.

The two-day program format presents four symposiums, namely: Adolescent Medicine, Office Orthopedic Problems, General Session and Peripheral Vascular Disease.

In addition to the scientific program there will be a short business session on Saturday morning, November 3. Saturday night will bring forth the President's Installation Banquet with the featured speaker as none other than Mac Cahal, Executive Director of the AAGP.

To date 40 technical exhibitors have reserved space. The Chase Hotel has made a number of construction changes and added new features which it is felt will contribute much to the success of the November 3-4 Annual Session. Have you marked your calendar?

They tell us, who were not there, that we missed history in the making at the Las Vegas AAGP convention. A record registration of 7,902 went into the attendance book. Of this figure 3,683 were physicians and a good number were from Missouri. We suggest that you read all issues of *GP* to learn what happened at Las Vegas (that which can be printed anyway). Dr. Charles Metz of St. Louis and Dr. Roy Pearse Jr. of Nevada, our competent delegates, both served on important reference committees, in addition to spending long hours in the deliberations of the Congress of Delegates.

MISSOURI
ANSAS

Delegates Metz and Pearse in action at session.

Among Mo. physicians attending were Drs. Becker, Atcheson, Metz, Gunn, Pearse, Casebolt, Dennis, Poggemeier, Crowe and Flynn.

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# Woman's Auxiliary

One of the outstanding events of our Auxiliary Year will soon be ours to enjoy and to profit by—the National Auxiliary Convention in Chicago June 24 to 28. Each year the significance of this great gathering of the members of the medical profession and their wives becomes more apparent. As we see our doctors taking part in their scientific programs, voicing their beliefs on health legislation and fighting for what they feel to be right for the health and freedom of the American people, we can feel a glow of pride in their efforts and their dedication. It is our privilege as Auxiliary members to follow their lead and to emulate their dedication in the struggle of American Medicine to remain a great and honored profession that may prove to be the very cornerstone of our freedom.

**Mrs. J. Martyn Schattyn**

The delegates we elected at our recent state meeting are capable women whose interest on the state and national levels has been proved: Mrs. Lawrence S. Crispell, our newly-elected president-elect will be chairman of the delegation; Mrs. Jordan Kelling and Mrs. Stanley S. Peterson are two of our most able past state presidents; Mrs. John W. Deyton is our versatile Quarterly Bulletin Editor; Mrs. Herbert H. Shuey is the immediate past president of Jackson County; and Mrs. Arthur W. Neilson is the wife of one of Missouri's most influential delegates.

The alternate delegates are equally qualified to represent us in Chicago: Mrs. Willard W. Bartlett is the founder of the Auxiliary in Missouri; Mrs. C. Stuart Exon is one of our state directors; Mrs. Durward G. Hall is the wife of Congressman Hall, another of Missouri's excellent delegates; Mrs. Donald M. Dowell is the wife of our new state president and active in her own Grand River Auxiliary; Mrs. Doyle C. Whitman is our state chairman for Community Service; and Mrs. Louis Forman is the newly-installed president of Jackson County.

We would all feel proud to have this group of women represent us at our National Meeting.

Mrs. Harlan English, our National President, has personified "Auxiliary" during her year in office, and the coming convention will be a reflection of her untiring efforts on behalf of medicine. The convention body is scheduled to meet for its first business session on Monday, June 25, but Jane Crispell and I plan to be there on the 24th for the special session to be devoted especially to the presidents' reports from all fifty states. These reports always take quite a bit of time, but last year all the presidents insisted they were an invaluable method of exchanging ideas at the grass roots level.

An innovation this year will be the "Program for Physician's Wives" scheduled at the early-bird hour of 8:30 to 9:30 a.m. on Tuesday and Wednesday, June 26-27. Featured speakers will be Dr. Theodore R. Van Dellen, nationally known health columnist, and the Honorable Everett M. Dirksen of Illinois, minority leader in the United States Senate. Their topics? "Guarding the Health of Your Husband" and "Becoming More Effective Partners in Medicine." Complete with the serving of a continental breakfast of coffee and sweet rolls, these meetings should be real "eye openers!"

It was with great pride that I read the slate of new national officers sent along with the 1962 Convention Portfolio. Mrs. Richard A. Sutter, a past state president and one of St. Louis' 1961 Women of Achievement, has been nominated for the office of North Central Regional Vice President. Last year Jane Wade was authorized by the state auxiliary executive council to propose Betty's name to the National Nominating Committee, and this year it will be my privilege, as authorized at our state convention, to again suggest her name for the 1963 National slate. We feel that Betty has much to offer the National Organization, and that the influence of the Auxiliary will be greatly enhanced by her clear and level-headed thinking.

Since my last visit with you in this Journal our state chairman for the Medical Student Loan Fund, Mrs. David O. Allen, has found it necessary to resign her responsibilities. In her place, and with the approval of the executive board, Mrs. Henry C. Bauman of Maryville has taken over the important duties of this committee. We

*(Continued on page 523)*

Volume 59, Number 6—June, 1962

# Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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**JACK W. WOLF, M.D.,** *Kansas City*

# The Irritable Colon Syndrome

### *Treatment With Chlorpromazine and Other Phenothiazine Drugs*

The irritable colon syndrome is an extremely common condition, as every general practitioner and every internist knows. Therapy of this condition in the past has never been very successful, but perhaps because it is considered neurogenic or psychogenic in origin and leads to no serious organic complications, and no one dies of it, clinicians have shown little or no interest in improving on its time-honored therapy.

The time-honored therapy has generally consisted of a bland and low residue diet, phenobarbital and atropine in one form or another, and some superficial psychotherapy.

Perusal of the latest editions of two most popular textbooks of medicine and one of the newest treatises on gastroenterology confirms these impressions.

The first textbook of medicine[1] states "antispasmodics are valuable in the management of the irritable colon. Tincture of belladonna and atropine are the most satisfactory. The clinical superiority of banthine or neobanthine over adequate doses of atropine has not been proved. Phenobarbital and the tranquilizing drugs are also helpful, particularly, in the anxious patient. In instances of severe pain or intractable diarrhea codeine or paregoric may be used. Kaolin, bismuth and bulk cathartics are not recommended. Treatment of the patient with an irritable colon involves psychologic rehabilitation, dietary care, and the use of antispasmodics and mild sedation. Intensive psychotherapy is rarely necessary."

The second textbook of medicine[2] states: "The drugs of greatest value are the antispasmodics. Tincture of belladonna is the standby; numerous atropine-like preparations alleged to give superior effects are of questionable superiority. The barbiturates are valuable and in conjunction with belladonna."

**The lack of effective treatment of the irritable colon syndrome in the past is reviewed and treatment with chlorpromazine and phenothiazine drugs is outlined and case histories to support the success of treatment are given.**

**Dr. Wolf is Associate Clinical Professor of Medicine, University of Kansas School of Medicine, Kansas City, Kansas, and Head of the Section of Gastroenterology, Menorah Medical Center, Kansas City, Missouri.**

The treatise on gastroenterology[3] declares: "The patient with the irritable colon syndrome is a good subject for interview therapy. If meantime symptomatic help is needed, nothing is quite as effective as dextrose-agar, psyllium-agar, or some other hydrophyllic preparations. For both the patient with diarrhea and the one with constipation this type of medication tends to bring bowel function back to normal. The autonomic drugs are generally not helpful and sedation is neither useful nor desirable. A normal diet is best."

The three references illustrate the differences of opinion relative to the treatment of the irritable colon syndrome. The only point of agreement is the belief in the value of mild psychotherapy and the lack of need of intensive psychotherapy. Two recommended antispasmodics but felt that none is better than atropine or belladonna. The same two recommended mild sedation. The third reference feels that neither the autonomic drugs nor sedatives are helpful. The term "tranquilizer" is mentioned only once as being a useful agent and then with no recommendations as to any specific type of tranquilizer. There is likewise a disagreement on the need of dietary control and on the value of such preparations as the hydrophyllic colloids.

With the introduction of chlorpromazine a drug became available which, as will be demonstrated in this article, offers vastly greater symptomatic relief than any previous therapy to patients with the irritable colon syndrome. Subsequently, other newer phenothiazine drugs, such as promazine and prochlorperazine, have also been shown to be highly effective in these cases.

Initially chlorpromazine was recommended principally for neuropsychiatric conditions and for nausea and vomiting.[4] When I first used chlorpromazine for these conditions. I soon observed that, in addition to its tranquilizing effects and antiemetic qualities, it was also highly constipating to most patients. This appeared to be due to its autonomic effects that are similar to those of atropine and other parasympathetic-blocking drugs. A single drug with both strong central tranquilizing effects and strong peripheral anticholingeric effects seemed theoretically a logical drug to be useful in the therapy of the irritable colon syndrome. Subsequent experience, as will be shown in case reports, has confirmed that theory. Chlorpromazine and other phenothiazine drugs may be said at this time to be extremely helpful and the best pharmacologic agents for the management of these patients. With the widespread use of the phenothiazine drugs for so many clinical conditions I had assumed that clinicians had become acquainted with its usefulness in irritable colon patients. Gradually, after consultations with colleagues on such cases, after failure to observe articles on such subjects in the scientific literature, and after failure to observe references to this use of the drugs even in the advertising literature of the various pharmaceutical companies, I came to the conclusion that this indication for the phenothiazine drugs was not of general knowledge—hence this article. Search of the literature has revealed no similar paper on this subject, only articles on the use of chlorpromazine in various gastrointestinal disturbances,[5] and several articles on the combined use of anticholinergic drugs and tranquilizers in gastrointestinal disorders.[6-9] Obviously, when combinations of drugs are used, one cannot be certain as to which drug is really the effective agent. The purpose of this paper is to demonstrate that the phenothiazine tranquilizers used without additional drugs give marked relief to patients with the irritable colon syndrome.

The following case presentations demonstrate that the use of chlorpromazine and other phenothiazine drugs really represents a great advance in the management of the irritable colon syndrome. In these cases the only other therapeutic measures employed were:

1. The most superficial psychotherapy consisting of (a) Explanation of the physiologic mechanism of production of the symptoms, and (b) Positive reassurance of the absence of organic disease.
2. The occasional use of hydrophyllic colloids, enemas or glycerine suppositories if constipation became extreme.
3. A liberal bland diet eliminating only the most irritating of foods.

## Cases Treated With Chlorpromazine

Case 1. Mrs. E. B., an 87-year-old widow had suffered for 60 years from the irritable colon syndrome, characterized by alternating periods of diarrhea and constipation and cramplike lower abdominal pains. Attacks of diarrhea were brought on mostly by emotional stresses. The diagnosis was confirmed at the Mayo Clinic in 1938. Sigmoidoscopy and x-rays of the colon were normal then and have remained normal when repeated every few years subsequently. Between 1938 and 1955 the periods of diarrhea became more frequent, more and more violent and resulted in considerable disability. Phenobarbital and other sedatives, antispasmodics including atropine, bathine, and even opiates, gave little and only transient relief. Elimination diets were likewise unsuccessful. Chlorpromazine was first used in 1955 and produced immediate and striking improvement. Since then episodes of diarrhea and cramps have occurred only at infrequent intervals and almost never last more than a single day. The patient continues to lead a full and active life at the age of 87. She continues taking chlorpromazine regularly, the dose being 25 mgs. three times daily.

Case 2. Mrs. L. N., a 56-year-old woman had suffered for about 20 years from the irritable colon syndrome characterized by recurrent attacks of diarrhea and cramps. She was first examined in 1956 several months after her return from the Mayo

Clinic, where the diagnosis of irritable colon was made. Sigmoidoscopy and x-rays of the colon were normal. She had been advised to take phenobarbital and atropine in association with a bland diet, but there was no improvement with this therapy. Chlorpromazine was prescribed, 10 mgs. four times daily, with immediate relief of the symptoms. She has continued to take chlorpromazine ever since and has had only a few mild and brief episodes of diarrhea since. She is now well controlled on 10 mgs. chlorpromazine only twice daily.

Case 3. Mrs. E. D., a 68-year-old woman, who had suffered for many years from the irritable colon syndrome characterized by frequent attacks of diarrhea and cramps, was first seen in 1956. X-rays of the colon and sigmoidoscopy were normal. Prior therapy with phenobarbital and belladonna had given little or no relief. Chlorpromazine 10 mgs. three times daily was prescribed. There was immediate relief of symptoms which has continued to this date. She still takes chlorpromazine, 10 mgs. three times daily. Her only complaint now is occasional severe constipation.

Case. 4. D. M., a 45-year-old white man, was first seen in 1956 complaining of recurrent attacks of cramps and diarrhea of almost five years' duration. Mr. D. M. is a Jewish refugee from Poland who came to the U. S. A. in 1949 after suffering heartrending family tragedies and prolonged confinement in concentration camps. He was highly nervous and anxious as are so many patients who survived similar experiences. Sigmoidoscopy and x-rays were normal. Chlorpromazine 10 mgs. three times daily produced prompt remission of his symptoms of diarrhea and cramps. After three months he was able to stop chlorpromazine, and since then has taken it only at times of recurrence of symptoms, usually when under some added emotional strain. At these times it has always brought prompt relief of symptoms.

Case 5. Mrs. M. B., a 36-year-old housewife, was first seen in 1957 because of recurrent severe diarrhea. Sigmoidoscopy and x-rays of the colon were normal. She was given chlorpromazine 10 mgs. three times daily with prompt relief of symptoms. She was continued on this drug at the same dose of 10 mgs. three times daily with complete control of symptoms. After two years of therapy she discontinued medication and remained asymptomatic for a year when an episode of acute emotional stress again brought on an attack of cramps and diarrhea. This attack again promptly responded to chlorpromazine 10 mgs. three times daily.

Case 6. Mrs. Z. M., a 41-year-old housewife, had suffered from recurrent mild attacks of irritable colon with diarrhea and cramps for about 17 years. These were usually associated with episodes of anxiety and menstrual irregularities. Phenobarbital and atropine were of slight benefit. Beginning in 1957 prochlorperazine gave more relief, although it also was not completely satisfactory. In 1959 she experienced an unusual severe and prolonged attack associated with symptoms of an agitated depression. Hospitalization became necessary. Chlorpromazine was prescribed, 50 mgs. four times daily. Improvement in the diarrhea and cramps was prompt, and there followed gradually improvement in the mental state so that there was complete recovery from the depression within two months. After this the dose of chlorpromazine was gradually reduced and she was able to discontinue it entirely after four months. In the two years that have elapsed since relief of symptoms there has been no recurrence of diarrhea, although all medications have been discontinued now for more than 18 months.

## CASES TREATED WITH PROMAZINE

Case 7. Mrs. R. L., a 74-year-old woman, had suffered for many years with recurrent diarrhea associated with a chronic anxiety state. X-rays of the colon and sigmoidoscopic examinations were normal. Therapy with phenobarbital, belladonna, meprobamate, probanthine and other sedatives and antispasmodics had been only partially successful. In 1959 she was started on promazine, 25 mgs. four times daily. There was prompt improvement both in the intestinal symptoms and in the anxiety state. Throughout the two years she has been taking promazine, there has been marked decrease in the frequency, duration and severity of the episodes of diarrhea, and in the last 18 months she has complained only of constipation.

Case 8. Mrs. J. M., a 58-year-old woman who had previously been in excellent health, developed a severe watery diarrhea with four to six movements daily. This at first was thought to be an acute gastroenteritis but failed to respond to treatment with bland diet, paregoric, bismuth, Kaopectate and sulfamanides. After the diarrhea continued for three weeks sigmoidoscopic examination and x-rays of the colon were made and found to be normal. The diagnosis of irritable colon was therefore considered. The patient was under considerable emotional strain because of a serious illness of her husband. Promazine was prescribed, 20 mgs. four times daily. The patient promptly improved, the diarrhea diminishing in both frequency and severity. After two weeks the patient was having only one or two slightly loose stools daily and the dose of promazine was reduced to 10 mgs. four times daily. After two more weeks the patient was entirely well. Promazine 10 mgs. four times daily was prescribed for one additional month before being discontinued. The patient has remained entirely well with no recurrences for more than a year since the promazine was stopped.

## CASES TREATED WITH PROCHLORPERAZINE

Case 9. Mrs. R. W., a 39-year-old housewife, had suffered for about 15 years from episodes of recurrent cramps and diarrhea apparently brought on either by emotional upset or dietary indiscretions. X-rays of the colon were normal. Prochlorperazine, 5 mgs. four times daily, resulted in prompt relief of diarrhea and cramps, more quickly and completely than she had ever obtained before from phenobarbital or belladonna and paregoric. Since her attacks have been infrequent in recent years, she does not take prochlorperazine steadily but only at the onset of episodes of diarrhea which are always terminated promptly with prochlorperazine, 5 mgs. four times daily.

Case 10. Mrs. B. S., a 50-year-old woman, had suffered from unusually long and severe attacks of recurrent diarrhea and cramps for 15 years. Her attacks were so severe as to be almost incapacitating and were usually accompanied by a severe anxiety state. During the 15 years there had been frequent visits to the Mayo Clinic and to various gastrointestinal specialists. Repeated gastrointestinal x-rays and sigmoidoscopic examinations were always normal. Phenobarbital, belladonna, banthine, paregoric, bismuth, Kaolin and other preparations were only partially helpful and most attacks had terminated spontaneously for no known reason, but only after several months of severe diarrhea. Prochlorperazine was first prescribed in 1957. Initially 5 mgs. four times daily was only partially successful but when the dose was raised to 10 mgs. four times daily, there was prompt and complete cessation of diarrhea and the patient soon became constipated. Subsequently, there has been only a single recurrence almost a year later and this episode again subsided promptly with prochlorperazine 10 mgs. four times daily.

Case 11. Mr. C. H., a 36-year-old man, operator of a gasoline filling station in a small city in Missouri, represented the most severe case of irritable colon syndrome in this series. He had suffered from frequent prolonged periods of violent explosive episodes of profuse watery diarrhea, so violent that he was often incontinent. Because of this he had become morbid and a social recluse, limiting his life to working at his filling station and at all other times staying in his own home. He had consulted many physicians, had many gastrointestinal x-rays and sigmoidoscopic examinations, all of which had been normal, and had tried all varieties of therapy which had been universally unsuccessful. Mr. H. was first placed on prochlorperazine, 10 mgs. four times daily, which immediately produced improvement to a degree he had never before experienced, although occasional bouts of diarrhea still occurred. The dose was increased to 20 mgs. of prochlorperazine four times daily which resulted in almost complete relief of diarrhea.

## Discussion

One must speculate on why chlorpromazine and other phenothiazine drugs should be so superior to the old combinations of sedatives and anti-spasmodics such as phenobarbital and atropine in the treatment of the irritable colon syndrome. Probably the greatest advantage of the phenothiazine drugs is in their central action, where their localization of action at mid-brain and hypothalamic levels is more appropriate than the cortical effect of phenobarbital for the control of such a disorder of emotional etiology.

But, in addition, the peripheral autonomic effects of the phenothiazine drugs often are more pronounced than the effects of atropine or banthine or other anticholinergic drugs. This is best demonstrated in the heart rate. Atropine and banthine in the oral doses used clinically seldom accelerate the heart rate, but chlorpromazine often causes considerable increase in heart rate when used in moderate clinical dosage. Likewise, a dry mouth and hot dry skin are generally present when chlorpromazine is used.

During the first two years of phenothiazine therapy of the irritable colon syndrome, chlorpromazine was the only drug used. Subsequently, promazine and prochlorperazine were tried and also found effective, although probably somewhat less effective than chlorpromazine. Because of the higher incidence of jaundice and other serious drug reactions with chlorpromazine, however, it has been felt wise during the last two years to begin therapy with prochlorperazine or promazine, and save chlorpromazine for cases not responding adequately. This was necessary in Case 6. It is to be emphasized that in cases diagnosed as irritable colon, if the initial dose of the phenothiazine drug employed does not alleviate the symptoms adequately, the dose should be increased; if that fails, chlorpromazine should be tried in increasing doses. If that also fails, one should reevaluate the diagnosis and embark on additional diagnostic studies. Phenothiazine drugs other than those employed in this series will almost certainly be found to be effective in the irritable colon syndrome. A few experiences with perphenazine and triflupromazine lend support to that prediction.

The phenothiazine drugs will be found more satisfactory in those cases of irritable colon characterized by cramps and diarrhea than in those characterized by cramps and constipation. In the latter type of case the phenothiazine drugs will relieve the cramps but increase the constipation often necessitating enemas for relief.

## Summary

1. Chlorpromazine and other phenothiazine drugs are the most effective pharmacologic agents for the control of the symptoms of the irritable colon syndrome. Their employment represents a significant advance in the therapy of this disorder.

*(Continued on page 503)*

**WILLIAM F. KISTNER, M.D.,** ***St. Louis,*** **Moderator**

# The Use of the Catheter and Pyelonephritis

## *Medical and Surgical Conference*

Recent emphasis in the literature concerning the possible dangers of the use of the catheter and the complication of pyelonephritis was the basis of this conference held at St. John's Hospital, St. Louis.

Participants were Charles W. Miller, M.D., St. Louis, internist; Joseph M. Krebs, M.D., St. Louis, gynecologist and obstetrician, and Grayson Carroll, M.D., St. Louis, urologist.

William F. Kistner, M.D., St. Louis, Moderator: At St. John's Hospital it is felt worthwhile to reopen the subject of the use of the urethral catheter because the possible dangers and complications of such a procedure have been so strongly emphasized in the literature in recent months and years. This controversy has seemed so intense that the reader of some medical journals might be led to believe that this procedure is never indicated except in dire emergencies. On the other hand, some authors have seemingly made light of the potential hazards of urethral catheterization. The feared complication of urethral instrumentation is, of course, that of pyelonephritis, and I am sure that in the discussion today this aspect will be stressed. The panel will approach the problem from the viewpoints of the internist, the obstetrician and gynecologist and the urologist.

Dr. Miller, would you open the discussion?

Charles W. Miller, M.D., St. Louis, Internist: Since infections of the genito-urinary tract are second in frequency only to those of the respiratory system and since many recent publications have incriminated the catheter as an etiologic factor in genito-urinary tract infections and of pyelonephritis, the conference this morning is held. There has been so much emphasis recently on the undesirable or unnecessary use of the catheter that some confusion and impractical conclusions have developed in certain areas in the medical teachings. I believe it is unnecessary to emphasize that the proper use of the catheter may be life-saving. Improper use of the catheter is to be condemned. The urethra lies in direct continuity with external environment and is therefore constantly threatened by bacterial invasions from without. There are always bacteria lying just at the meatus or further within the urethral passage which may contribute to contaminations when the catheter is passed.

The most frequent organism found in genitourinary tract infections are those that are normally inhabitants of the colon. If a culture of the urine reveals proteus, or Pseudomonas inquiry will usually elicit information that the patient has within a recent period been catheterized or undergone other urethral instrumentation.

With the patient in the examining room in the lithotomy position, careful preparation and draping, and aseptic technic followed, I do not believe catheterization in any instance presents a hazard.

In the female, the external genitalia, including the vulva, should be prepared with soap and water, and a 1 to 10,000 solution of Zephiran chloride solution applied. In the male, the external genitalia should be scrubbed with liquid soap, rinsed and Zephiran chloride applied.

With the personnel in the hospital carefully instructed in the proper technics of catheterization, I believe catheterization can be carried out with the minimum of risk. Bacteria will certainly be introduced into the bladder. This may be followed by a few days of bacteriuria but generally speaking no residual cystitis will follow.

I believe, on the wards, catheterized females require two trained individuals, so that undue trauma is to be avoided and the proper aseptic technic carried out. Frequently the nurse gets an order to catheterize the postoperative patient. Often the night staff is inadequate. The nurse prepares the patient, drapes her and arranges the light. The patient, obese female, due to apprehension or for some other reason, moves, the light is disarranged, and the nurse finally with the use of her elbows pulls it in place and continues the catheterization, after probably contaminating the catheter by several unsuccessful attempts to find the urethral orifice. Under these circumstances, it is not difficult to visualize how genito-urinary tract infections might occur.

I would emphasize that catheterizations be carried out only by trained personnel having adequate help at the time catheterization is to be carried out, especially if the patient is a female and the catheterization is to be carried out in bed.

Clean voided midstream specimens are often indicated. A bacterial count and a gram stain for gram negative organisms may be diagnostic and thus eliminate the necessity of catheterization.

The administration of antibiotics following the catheterization is probably of no value unless bacteriologic studies and sensitivity studies are obtained.

The routine administration of antibiotics prophylactically will probably result in a resistant organism developing. If proper technic is followed, there is no obstruction or other urologic abnormality noted, catheterization can be carried out with a minimal risk of infection.

Joseph M. Krebs, M.D., St. Louis, Gynecologist and Obstetrician: Perhaps no one service in the hospital employs the catheter as routinely as does obstetrics and gynecology. Since patients admitted to the labor section often present a "bloody show" a voided admission sample is usually omitted in favor of a catheterized specimen obtained prior to delivery. In this instance, besides the value of the urine specimen, the bladder is emptied to reduce trauma to this organ either by the head and shoulders of spontaneous delivery or by forceps should the delivery be instrumental.

When labor and delivery are precipitous so that circumstances do not permit these procedures, often a catheterized specimen is obtained a day or two postpartum since the lochia prevents accurate evaluation of the possibility of bladder trauma to the particular case at hand. If considerable displacement has taken place as in low cervical sections, complete abdominal hysterectomies, anterior colporrhaphies and vaginal hysterectomies the catheter is usually permitted to remain a matter of days.

Just as vaginal discharges in early labor preclude a "pure" voided sample of urine so also does the regular or irregular menstruation which presents at the time of entrance of a good many gynecologic patients. The urinary findings of such patients are necessarily determined by catheterized specimens. Indeed, female patients entering the hospital with lower abdominal pain must of necessity have a catheterized specimen of urine for proper differential diagnosis.

It is not surprising to show that the urethra contains organisms; though the bladder content is normally sterile, the area about the urinary meatus, like the remainder of the body surface, is grossly contaminated. It is too much, therefore, to expect that surgical sterilization of the meatus can be effected. Culture of catheter tips can be shown then to produce positive results. There are conflicting reports in the literature regarding the use of the catheter within a catheter as a means of obtaining a sterile specimen without contaminating the urinary bladder from the organisms present within the urinary meatus.

This preoccupation with prevention of contaminating the urinary tract through catheterization has led some men to obtain pure bladder content by means of suprapubic needle punctures. This certainly seems to be a formidable procedure and is overdoing it a bit, like cracking nuts with a sledge hammer.

The possibility of obtaining a clean voided sample has been investigated by numerous observers. It is considered suitable if quantitative urine cultures are done. As far as technic is concerned, the procedure seems to be as much trouble for the nursing service as the procedure of catheterization itself. Many, however, feel that it is a satisfactory means of obtaining suitable urine specimens without contaminating the bladder.

The occurrence of postoperative bladder infections in cases with preoperative catheterization is only circumstantial evidence of the catheter being the cause. It has never been shown that these infections would be avoided if catheterization had been omitted.

The possibility of trauma to the distended bladder looms large as a threat to the patient without a catheter and the possibility of an unnoticed minor bladder injury healing with continuous bladder drainage for several days cannot be overlooked.

Difference of opinion seems to exist regarding the use of prophylactic chemotherapeutic agents in effectively reducing the incidents of immediate postoperative infections with the indwelling catheter. Sexton in *Obsetrics and Gynecology* **17**:739, 1961, showed that this procedure was worthwhile as shown in a two year followup. His findings are contradicted by a report of Kass in the *New England Journal of Medicine* **256**:556, 1957, who considered prophylactic chemotherapy and indwelling catheter as ineffective.

In this same article Kass has shown that organisms applied to the external genitalia, away from the meatus, appear in large colony counts within 24 to 48 hours later in bladder urine cultures.

After reviewing all of the pros and cons in the literature, we conclude that, when indicated, the calculated risk of trauma, infection and all its sequelae must be weighed against the need for catheterization. At present, as far as obstetrics and gynecology is concerned, there seems to be no available substitute for the retention catheter in certain instances or single catheterization procedures in others.

Grayson Carroll, M.D., St. Louis Urologist: It has been well documented that the anterior urethra of the male and female is the habitat for bacteria and when a catheter or other instruments are inserted, these bacteria are carried into the bladder.

When bacteria are introduced in the normal bladder, does it result in urinary infection?

Harvard and Glenn[1] of the Yale Medical Center conducted a study in 1961 in an effort to answer this question.

The results: 58 female patients had urethral instrumentation. Positive cultures were obtained in 34 per cent of urine specimens taken after 48 hours. Subsequent examination of urine obtained by catheterization from the culture-positive patients failed to reveal bacteriuria. They conclude bacterial contamination of bladder urine does occur after instrumentation but does not imply infection.

Jackson and Grieble[2] in 168 patients catheterized in their clinic found only three patients developed bacteriuria and they stated "from the data intermittent catheterization of patients in our Outpatient Department does not appear to be a significant factor in the pathogenesis of pyelonephritis."

Apparently there are defense mechanisms of the bladder to bacteria introduced. The washing out of the normal bladder is one, but it has also been demonstrated that bacteria decrease in count due to some other mechanism not yet known.

Extensive experiments reported by Frank Hinman[3] in December 1961 "demonstrate that bacteria introduced into the normal bladder are inhibited in their growth when compared to similar bacteria introduced in vitro in urine from the same bladder. And bacteria decreased rapidly in six to eight hours and disappeared in 72 hours." This confirms the earlier observations of Cabot[4] in 1920; Helmholz[5] in 1934, and others.

Kass[6] in 1960 concurring in an effort to explain how a normal bladder clears itself of bacteria theorized that, "The implication here is that there is an antibacterial mechanism in the lower urinary tract, presumably related to the metabolic activity of bladder mucosa."

It would appear then that bacteria introduced in the bladder does not usually cause infection. This coincides with our clinical observation.

Do bacteria introduced in the bladder reflux normally to the kidney?

Dr. Vivaldi,[7] making studies in the rat, demonstrated that when Proteus vulgaris was instilled in the bladder pyelonephritis was produced consistently, and he and Kass inferred from these experiments that the same thing occurred in the human being.

It is well recognized and fully documented that regurgitation of urine does not occur normally in humans. To mention a few: Meredith Campbell[8] in 150 cystograms was unable to demonstrate regurgitation. Bunge,[9] in 24 patients ranging from 9 months to 74 years, found no reflux. Jones[10] and Headstream demonstrated only one in 100 normal children. Politano[11] in 50 patients did not observe it in any.

Subsequent to this report by Dr. Vivaldi, a careful experimental study was made at the University of Chicago by Dr. Sommers,[12] which should be read in detail. He states that indigo carmine introduced in the bladder of the rat showed regurgitation in 17 of the 20 observed, even in 0.4 cc. of water under the smallest of pressure. This corroborates the findings of Vivaldi in rats but weakens the implication that pyelonephritis develops in normal men and women by regurgitation of bacteria when introduced by catheterization. Prior to the findings of Vivaldi and Kass others observed this in animals. C. M. Gruber[13] in 1929, in an article on comparative study of intravesical ureters, stated that reflux occurred in 80 per cent of rabbits, a phenomena not demonstrated in man. Graves[14] and Davidoff demonstrated 86 per cent of rabbits refluxed and O'Conor[15] made similar observations.

One can hardly help but conclude that reflux from the bladder to the kidney occurs normally in animals but does not occur in normal human beings.

Do the bacteria in the normal bladder of human beings reach the kidney by the blood stream?

This question seems to have been also answered by further observations of Sommers who stated in conclusion of his observations, "Where organisms were introduced into the rat bladder by means of a urethral catheter, a kidney previously obstructed by ureteral division and ligation never gave positive cultures even through such kidneys are abnormally susceptible to blood-borne bacteria. Presumably, therefore, hematogenous spread of bacteria does not occur following the catheter inoculation of bacteria in the bladder of the rat."

Clinically, in man it has not been observed to occur.

Leadbetter of Boston in a recent study found no continuing infection as the result of instrumentation.

Dr. E. T. Bell,[17] author and lifetime student of renal pathology, stated that infections of the lower urinary tract were not important as an etiologic factor in chronic pyelonephritis.

Dr. George Prather[18] stated in the *Transaction of the American Association of Genitourinary Surgeons*, "We find no evidence to implicate the catheter as a significant factor in the cause of chronic pyelonephritis. The vast majority of patients developing acute pyelonephritis have never been catheterized."

If the catheter is not the major cause of pyelonephritis, what are the recognized causes?

There are two major causes: (1) the introduction of bacteria into the lymph or blood stream from some focus in the body, and (2) the presence of some abnormality in the urinary tract, resulting in the lodging of the bacteria.

Apparently both factors must be present. Common sources of showers of bacteria into the blood stream noted clinically are respiratory infections, sore throat, tonsillitis in the winter. Then one sees an increase in Streptococci, Staphylococci, and even Pneumococci as the dominant organism in the urinary infections which are seen at this time.

Gastrointestinal disturbances such as diarrheas, diverticulitis and anal fissures result in the more frequent occurrence of bacillary infections such as Proteus, B. coli, Aerogenes, and even Enterococci (Strep. fecalis).

Pelvic infections, endocervicitis, and infections of Skene's glands often cause flareups or urinary infections which are usually urethral and bladder. Lymphogenous routes from endocervicitis have been known to go to the kidney, well demonstrated by Winsbury White who injected India ink in the pelvis and recovered it in the perirenal lymph nodes. The lymphogenous route is recognized.

E. D. Frank[19] writing in the *Proceedings of the Society of Experimental Biology and Medicine* in 1961 noted "gram-negative bacteria can be grown from the lymph nodes of the liver and mesenteric nodes of the dog after exposure to hemorrhagic shock. These data confirm the view that bacteria are continuously invading from the intestine." Predisposing factors for urinary infections are diabetes, hypokinemia, hypogammaglobulinemia and pregnancy. Dr. Favour[20] on a panel on pyelonephritis made up this poem.

There once was a bacterium named Proteus,
Who deserted the colon most odious,
To live in the kidneys more commodious.

When bacteria are introduced into the blood stream from a systemic source does pyelonephritis occur when the kidneys are normal? Apparently not. Brewer[21] in 1916 demonstrated experimentally in dogs that bacteria introduced into the blood stream produced a pyelonephritis in those kidneys in which the kidney was traumatized or obstructed. The normal kidneys were not affected. These experiments were repeated with the same results by Mallory,[22] Sampson,[23] Lepper[24] and Hess, all independently.

Henry Weyrauch[25] of the University of California, as recently as 1959, introduced bacteria into the blood stream in normal animals and failed to produce pyelonephritis. When one ureter was partially ligated and bacteria introduced, renal infection developed in the occluded side but not in the unobstructed side. Trauma of one kidney rather than occlusion of the ureter has produced the same. However, the introduction of Staphylococcus aureus by De Navasquex[26] caused pyelonephritis in each instance even though there was no obstruction or trauma. He attributes this to coagulose production and subsequent diffusion of coagulose into the adjacent parenchyma and suppuration. This is probably one mechanism of pyelonephritis production. Scar tissue results occluding the tubules and subsequent bacillary infection causes recurrent pyelonephritis.

Congenital dysplasia, that is congenital underdevelopment of renal parenchyma, has been demonstrated by N. O. Ericcson[27] to be surprisingly high resulting in pyelonephritis frequently in children.

Reduplication of a ureter, aberrant vessels at the ureteropelvic junction, stones and strictures all predispose a kidney to infection and the detection and correction of these are necessary if recurrent infections are to be prevented.

Culting B. Favour in a symposium of the Southern Medical Association meeting in St. Louis stated that when 10,000 coliform organisms per ml. are given to an animal it is found that the liver and spleen are capable of clearing 85 to 90 per cent of this number by one passage of the blood through the vascular system, but the kidney not equipped with the rich reticuloendothelial system, clears less than 10 per cent.

The extreme vascularity of the kidney, together with its lack of natural inhibitory factors seen in other organs, makes the hematogenesis route the most plausible one to cause pyelonephritis.

*Obstructions.*—Obstruction is the most common cause of initial and recurrent infection. The correction of this is often the only way to prevent chronic pyelonephritis. Lattimer and Melicow[28] reported 89 of 133 children with bladder neck obstructions had reflux and infection. Campbell and Lyttle[29] observed that four fifths with demonstrable obstruction had infection and reflux. Reflux is commonly expected in a neurogenic bladder. Valves and contractures in children, strictures, stone, and enlarged prostates in older people, invite infection, reflux, dilated ureters, and hydronephrosis and pyonephrosis. Altered architecture of the nephron causes minute obstructions.

In conclusion, it hardly seems plausible in the light of all these observations that the catheter can be anything but a minor cause of pyelonephritis and instrumentation and catheterization should not be withheld when it is so helpful in the diagnostic and treatment field.

Dr. Kistner, Moderator: It has been pointed out by the discussants today that the urethral catheter continues to be a necessary part of the modern medical armamentarium. It appears to be the consensus of the group that there is, as yet, no satisfactory substitute for this procedure and that by utilizing proper precautions the incidents of harmful after effects can be held to an acceptable level.

I want to thank the panelists for a profitable session this morning.

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## IRRITABLE COLON SYNDROME

*(Continued from page 498)*

2. Cases are presented to support these conclusions.

3. The physiologic mechanism of the action of the phenothiazine drugs in these cases is discussed.

3. The combination of phenothiazine drug therapy, superficial psychotherapy, and a liberal bland diet will satisfactorily control the symptoms of almost all cases of the irritable colon syndrome and represents optimum therapy for this condition today. When phenothiazine drug therapy fails to control the symptoms, the diagnosis must be reevaluated.

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JOSEPH SACAMANO, *Columbia*

# Another Look at Cystic Fibrosis

Cystic fibrosis causes virtually all cases of pancreatic insufficiency, the majority of chronic lung diseases and about one third of the cases of cirrhosis of the liver and portal hypertension in children.[1] Cystic fibrosis occurs in one out of each 600 to 1,000 live births,[2, 3] or stated another way, about 100 Missouri children each year are born with cystic fibrosis. This disease kills more children than poliomyelitis, rheumatic fever or diabetes.[4]

Despite these statistics, cystic fibrosis continues to be regarded by many as a rare disease. It may be overlooked as a possibility in the case of a child with a degree of malabsorption and/or recurrent respiratory disease. This is probably in part because the early symptoms of cystic fibrosis may mimic those of other diseases, i.e. asthma, bronchitis, food allergy and celiac disease.

Cystic fibrosis has been recognized as a separate disease entity only in the past 24 years. In 1938 Dorothy Anderson did her classic study differentiating cystic fibrosis from celiac disease.[5] The former condition received its name from the description of the anatomic findings in the pancreas of affected children. A few years later, Farber pointed out the extrapancreatic pathology (lungs, bronchi, liver, gallbladder) associated with abnormality of mucous gland secretions in those parts.[6] This led some to refer to this disease as mucoviscidosis. In 1953 the abnormal electrolyte content in the sweat was discovered, and the hypothesis made that the disease was a generalized defect of the exocrine glands.[7] Today, the literature contains more than 400 original articles about the disease, yet the basic metabolic or enzymatic defect is still unknown. With this growth in knowledge has come a change in the ideas of management and, therefore, prognosis.

At first, many physicians had resigned themselves to the dreary concept expressed by an early writer, "Children with cystic fibrosis die in the first year." Because of earlier diagnosis, recognition of the milder forms of the disease and improvement of therapy, such a fate is no longer necessary. Indeed, 10 to 20 per cent of these children can reach adolescence and some have gone on to productive adulthood. In a study by Schwachman, 46 cystic fibrosis patients greater than 10 years of age and 10 greater than 15 years of age were followed for five years.[9] During this period, only five died. Indeed, the prognosis seems to improve when the cystic fibrosis patient reaches adolescence.

The purpose of this paper is the review of the present understanding of cystic fibrosis with emphasis on pathogenesis, early diagnosis, and treatment.

**Cystic fibrosis is an important cause of chronic respiratory disease and/or malabsorption in children. The diagnosis is made after eliciting a typical history and confirming this with sweat electrolyte determinations. Therapy should be aimed at controlling respiratory infection, preventing further pulmonary embarrassment, correcting any pancreatic achylia and replenishing excessive salt losses.**

**Mr. Sacamano is a third year medical student at the University of Missouri School of Medicine. During last summer he held a special fellowship from the National Cystic Fibrosis Research Foundation in connection with the University of Missouri summer fellowship program. The fellowship time of ten weeks was spent in an inter-disciplinary study of cystic fibrosis including its clinical, psychologic and research aspects.**

## Genetic Considerations

Good evidence indicates that cystic fibrosis is a genetically determined disease. Most authorities believe it to be transmitted by a recessive, non-sex-linked gene. Thus, it would be necessary to mate heterozygotes or "carriers" to produce a homozygotic child expressing the characteristic disease. Theoretically, one in four children born to heterozygote parents should express the trait, but because of genetic variables this principle cannot be used for a specific prediction within a given family. The heterozygote persons may be asymptomatic or present mild forms of the symptoms, such as food allergy, or may have bronchiectasis or emphysema.[10, 11]

## PATHOLOGY AND ITS MANIFESTATIONS

The basic pathology stems from the accumulation of large amounts of abnormally viscid mucus in most of the mucus secreting glands of the body, such as those in the lung, the pancreas, the gastrointestinal tract and the liver.

The lesion most potentially lethal is the lung involvement. Because of its volume and viscosity, the mucus from the bronchial glands tends to accumulate. Lungs so affected are prone to frequent infection, with the most common offender being *Staphylococcus aureus*. Early changes include obstructive emphysema or atelectasis. Progression of the disease leads to bronchiectasis, abscess formation, fibrosis and diffuse pneumonitis. These changes, if severe, cause pulmonary hypertension and cor pulmonale.

In the pancreas, the mucus acts to plug the acini and ducts, leading to distention of these spaces and later fibrous scarring—hence, the derivation of one of the names of this disease. The lesion gives rise to decreased pancreatic enzyme secretion with subsequent failure of absorption of the intestinal contents. If this process takes place in the fetus, meconium is not digested and intestinal obstruction is found in the neonatal period. Although nearly 80 per cent of cystic fibrosis children show some degree of intestinal involvement, only 10 per cent of these occur in newborn infants as meconium ileus.[13] The remaining children express their pancreatic defect in later childhood as varying degrees of inability to absorb protein (decreased trypsin), fats (decreased lipase) and carbohydrate (decreased amylase and carboxypeptidase). It should be noted that there is no demonstrable pancreatic defect in about 20 per cent of the cases. Since insular tissue is unaffected, diabetes is a rare finding.

Usually, the liver involvement is not severe. There is often diffuse fatty infiltration, mild hepatomegaly and focal biliary cirrhosis. However, in about 2 per cent of cases, the extent of inspissation of mucoprotein is more severe and causes a multilobular biliary cirrhosis with concretions which can lead to portal hypertension.

Along with the mucous glands, other exocrine glands may be affected, including the sweat and salivary glands. Recent work indicates that an abnormal precursor solution is formed in these glands, and higher than normal amounts of sodium and chloride are excreted. Values of sweat sodium are 10 to 90 mEq/L in normals and 80 to 190 mEq/L in cystic fibrosis patients. Sweat chlorides range from 1 to 60 mEq/L in normals and 60 to 160 mEq/L in cystic fibrosis.[13] This defect may lead to severe salt losses and prostration in hot weather. The elevated levels of sodium and chloride serve as the basis for one of the prime diagnostic tests for cystic fibrosis.

## DIAGNOSIS

Cystic fibrosis is a condition in which crippling complications can be greatly diminished by early diagnosis and adequate therapeutic programs. Early diagnosis and proper therapy can make the difference between a child who is continually sick, grows poorly and who is almost certainly headed for an early demise, and a child who sees his doctor frequently but who is seldom severely ill and whose growth and activity approach those of a normal child.

The history and physical findings are invaluable aides to the diagnosis of cystic fibrosis. Indeed, they are probably of greater value than any "screening test" in the diagnosis. The family history is especially important. Most patients belong to families having a history of childhood deaths "with pneumonia" on either or both maternal or paternal sides. A history of meconium ileus always indicates cystic fibrosis.[14] When surgical correction is possible, the prognosis of these cases is similar to that of other early diagnosed children.[15] Ravenous appetite but subnormal growth in an infant are expressions of pancreatic achylia. The typical stool is bulky, greasy, buoyant and extremely foul smelling. The stasis of viscid pulmonary secretion leads to recurring respiratory infection and congestion. Because of the elevated sweat electrolytes, parents may upon kissing the child, discover him to have a "salty taste."

On physical examination, a fully developed case reveals a child with a full face, distended abdomen and slender extremities. Emphysematous changes may be present along with cyanosis and clubbing. Rectal prolapse is said to occur in about 22 per cent of the cases.[13]

Many laboratory procedures have been used, the most common of which was duodenal intubation with analysis for trypsin level. Since 20 per cent of the patients have normal pancreatic function, and less than 1 per cent have normal sweat electrolytes, chemical analysis of the sweat for its chloride and sodium levels has become the test of choice. In fact, sweat electrolyte analysis may be considered the one laboratory test necessary for the diagnosis of cystic fibrosis.[3]

Sweat samples for electrolyte analysis were formerly obtained by enclosing the child in a plastic sheet, thus heating him and collecting the sweat produced. This method is time consuming, uncomfortable for the patient and is not without danger. Iontophoresis of pilocarpine is a newer method used at the University of Missouri which overcomes these objections.[16] The sweat producing drug (e.g. Pilocarpine nitrate 0.2 per cent) is introduced into a small area of the skin with a weak and painless electrical current. The stimulated sweat is collected and then analyzed for either chloride or sodium.

Several so-called screening tests have evolved making use of the high sweat chloride levels. They are generally easy to perform, but are not highly regarded because of the possibility of false positives and negatives and the fact that chemical analysis must still be done to provide laboratory confirmation for the diagnosis of cystic fibrosis. However, if one understands their limitations and follows up suspicious results (definitely elevated or borderline) with electrolyte quantitation, they are of some value. They generally involved the application of a silver nitrate impregnated medium to the sweating surface and observing a color change.*

Since analysis of duodenal contents does not always provide a positive diagnosis and is unpleasant for the patient and the physician, it is seldom done at the present time. The Lipiodol test yields qualitative information about pancreatic enzymes (specifically, lipase) and is more adaptable to routine office procedure. Following ingestion of a fat meal (5 to 10 cc. of Lipiodol—an edible iodinated poppy seed oil) absorption is demonstrated by the presence of iodine in the urine 12 to 18 hours later. A simple starch indicator gives a color reaction in positive tests indicating the presence of pancreatic enzymes. Other tests used to explore this aspect are microscopic examination for fecal starch and fat, and testing the tryptic activity in the stool.

## Treatment

The immediate aims of therapy for cystic fibrosis include rigid control over respiratory infection, maintenance of adequate respiratory function and the restoration of good intestinal absorption. Less difficult but also of importance is the replacement of excess salt losses in hot weather.

Therapy aimed toward control of the lung disease is most important and seems to be the area of most disagreement as to the method to be used. In 1960, Matthews at Western Reserve University, reported a 3 per cent mortality among 67 patients seen over a three year period and a clinical evaluation (Schwachman's criteria[9]) revealed improvement in 81 per cent of the cases.[17] Personal communication in August 1961, reveals that the study has grown by 50 additional patients without additional mortality. Also significant, is that the Western Reserve group has had to readmit to their hospital only 8 per cent of their patients after the initial intensive workup. Under Matthew's regime, continuous "prophylactic" antibiotics are not given. Instead, the child is seen at regular intervals, preferably monthly, and sputum or throat cultures taken. Quantitative examination is made for *Staphylococcus aureus, Pseudomonas,* or *Proteus.* If any of these organisms are found in significant numbers, antibiotic sensitivities are determined. If antibiotics are indicated by bacteriologic studies or by physical signs of chest infection, they are given in short but intensive courses until the infection is controlled and they are then discontinued.

Mobilization and removal of pulmonary secretions improve ventilatory ability and decrease the amount of media for bacterial growth. Most authorities agree that this is essential during exacerbations but Matthews uses this principle continuously in cases with lung involvement and considers it prophylaxis against further loss of pulmonary function. The methods include:

1. Aerosol therapy before each meal (noon treatment is omitted in school age children) and at bedtime. The medication used is 90 per cent Neosynephrine and 10 per cent Propylene glycol and is administered by a unit such as the Mistogen.

2. The aerosol is followed by two to five minutes of postural drainage. Newer developments indicated that the drainage is enhanced if a parent or assistant continuously claps on the child's chest with cupped hands during the drainage period.

3. Breathing exercises are utilized simultaneously with aerosol therapy.

4. Physical activity is often an excellent way to improve the coughing up of mucus. For this and for psychologic reasons, physical activity is not limited.

5. Mist therapy is undertaken at night and during all naps. Here the patient sleeps under a plastic tent (often homemade) with a solution of 10 per cent Propylene glycol and 90 per cent water nebulized into it by equipment such as two Mistogen MG 11 C units.* The fog should be thick, and in warm weather an ice compart-

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* Typical of this type of test is one called Fibros Paper produced by Consolidated Laboratories of Chicago, Illinois.

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ment may be necessary to cool the tent. A 0.5 molar saline mist is quite effective at liquifying secretion and is used only under closely supervised hospital conditions because of the danger of aspiration of mobilized mucus, with obstruction of the trachea or bronchi.

This regime is not simple and perhaps should be taught to a family while the patient is hospitalized. After an effective initial instruction, most master the technics well and fulfill them willingly when the realization of the child's improvement becomes evident. No small factor is the cost of the equipment. However, this is not more than the cost of many home appliances or luxuries and is considered essential in maintaining long periods of good health in a child with cystic fibrosis.

As an alternative to this regime, some centers shift the point of attack from the intensive mechanical "prophylactic" methods to the earlier method of using constant "prophylactic" antibiotic coverage. The methods vary. Some use a daily dose of sulfa or penicillin as long as sputum or naso-pharyngeal culture shows sensitivity of the flora. Others rotate the child's drug every two to three months in hopes of preventing the development of resistant forms. These groups generally reserve aerosol therapy for exacerbation of respiratory disease. Using this approach some claim good results.[12]

The absorption defect is controlled by the use of one of the commercial pancreatic enzyme preparations. The diet should conform to the general concept of being high in protein, containing simple carbohydrates with moderate fat restriction. Two or three times the normal dose of aqueous vitamins with supplemental calcium is desirable. Free use of table salt in hot weather generally manages the sweat loss.

## National Cystic Fibrosis Research Foundation

In 1955, the National Cystic Fibrosis Research Foundation was formed in Philadelphia by a group of interested physicians and parents. Its aims are the promotion of research in cystic fibrosis and the distribution of information to lay people and physicians. At the present, this organization has grown to 128 chapters in cities all over the U. S. There are active chapters in St. Louis and Kansas City which have members coming from large areas around the respective cities.[*] An important function of these groups is the regular meetings where mutual problems are discussed. Not only do they materially benefit from each other's experience, but their exchange of views serves as a form of group therapy, helping the parents to learn to live with this constant problem. Also, these organizations have a limited amount of equipment for loan to members.

I have spoken to many parents who were initially overwhelmed by the problems of caring for a child with cystic fibrosis. They received considerable psychologic support and practical help from their local organization. Interested persons may join by contacting these groups, or they may be introduced by their physician.

## Summary

Cystic fibrosis is a not uncommon disease of children and young adults. Early diagnosis and effective treatment are rewarded by an appreciable longer life-span of a near-normal patient. Electrolyte analysis (chloride or sodium) of sweat is a reliable diagnostic tool, the sweat being more easily and safely obtained by iontophoresis or local thermal stimulus. Therapy includes control of pulmonary infection, maintenance of good respiratory function, correction of pancreatic achylia and replenishment of salt losses. Vigorous, well-directed therapy results in a healthier child with a longer life expectancy and a less burdened family.

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[*] Kansas City Chapter: 20 West 9th Street, Kansas City, Missouri. St. Louis Chapter: 7104 Yates Street, St. Louis 16, Missouri.

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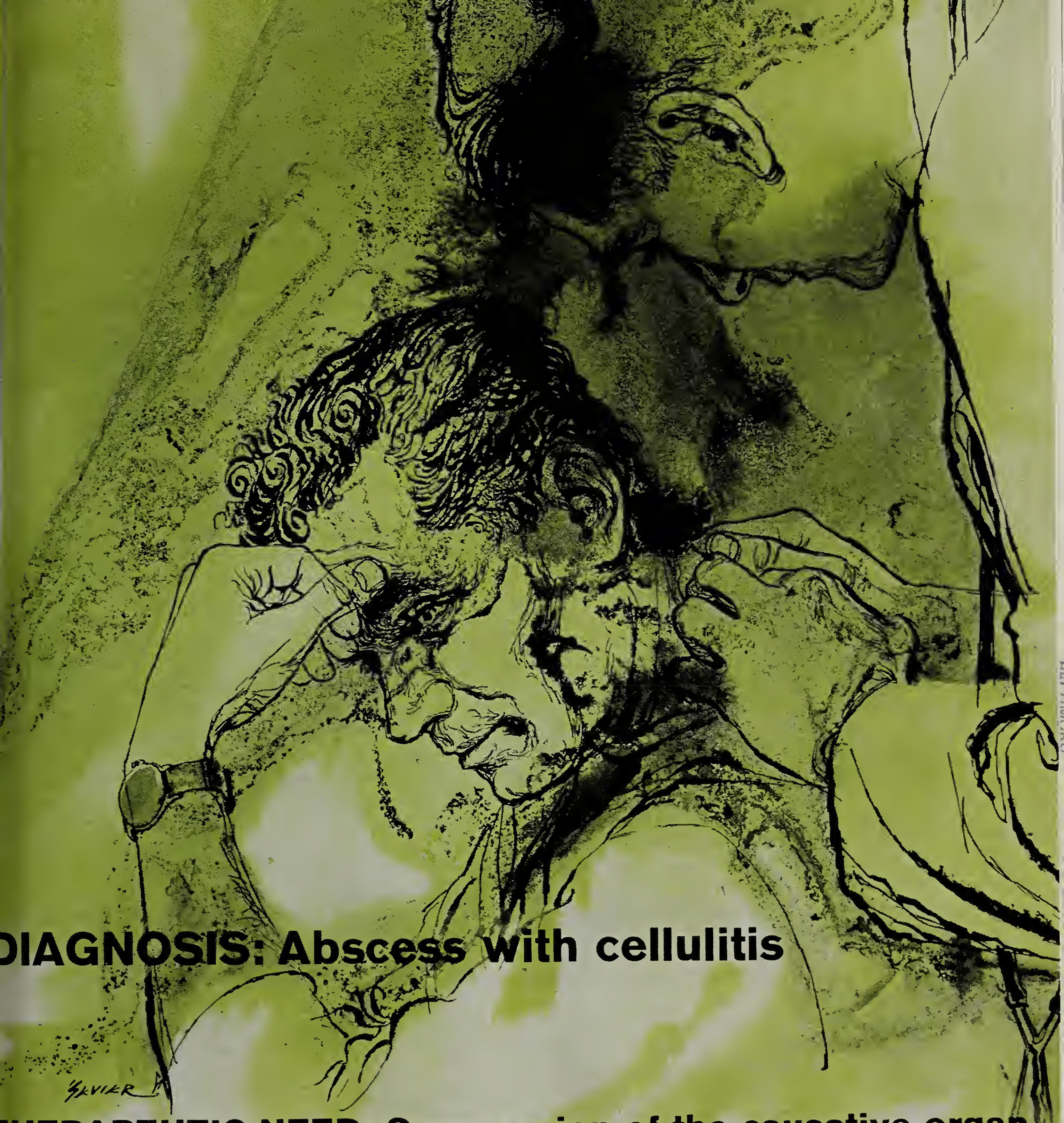

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# Rheumatic Fever Serology With Heart Tissue

**The literature on heart tissue as the antigen in rheumatic fever serology is presented and a study of 38 sera by the passive cutaneous anaphylaxis technic is reported and potential reasons for failure of the test to detect such antibodies is discussed.**

**Dr. Barrett is an Associate Professor of Microbiology, University of Missouri School of Medicine.** **The work was supported in part by a Missouri Heart Association research grant. A number of the sera made available for the study were from the Children's Convalescent Center, Kansas City.**

Antistreptolysin O titrations, C-reactive protein determinations, streptococcus grouping tests and the identification of antibodies to streptococcal products such as hyaluronidase, streptokinase, desoxyribonuclease and others have repeatedly demonstrated the importance of serologic procedures to a study of rheumatic fever. Although serologic methods have rendered the diagnosis of recent streptococcal infections both sensitive and accurate, some investigators have sought to ascribe a more fundamental role to immunology by implicating it in the etiology of rheumatic fever. Such a concept can hardly be considered modern since hypersensitivity has been thought a possible cause of rheumatic fever since the studies of Schick on serum sickness in 1905 and on scarlet fever in 1912. Weintraud[1] in 1913 also speculated that tissue changes seen in rheumatic patients could arise from anaphylactic reactions.

It is apparently true that rheumatic fever (RF) patients have a heightened immunologic reactivity compared to normals even though some difficulty has been encountered in establishing this point. When rheumatic patients were examined for agglutinins or dermal hypersensitivity following antigenic stimulation, little or no change from normals was observed.[2, 3, 4] An inability to identify a specific host factor for rheumatic fever opened the way for conjecture that it might be hypersensitivity[5] and opinion in favor of a hypersensitive etiology continued to gain ground during the 1940's.[6]

Only when incomplete antibodies rather than normal agglutinins or skin hypersensitivity were sought was it determined that rheumatic fever patients respond with antibody sooner than normals[7] and that the titers were slightly but significantly higher. Since these results were achieved in rheumatic fever patients it was criticized because the increased serologic reactivity could easily have been a result rather than a cause of the rheumatic condition. Consequently a study of 998 normal persons immunized with a nonstreptococcal antigen *(Brucella abortus)* was initiated.[8] Each person was categorized according to his ability to produce incomplete antibody and it was found that 12 cases of rheumatic fever occurred during the following nine months of observation. All 12 of the subjects had been classified as good or extremely good producers of incomplete agglutinins. For the group examined, these results are statistically significant.

If it can be accepted that increased immunologic sensitivity to antigenic stimuli is associated with rheumatic fever, what is the exact nature of the association? Some such as Schick and Weintraud believe the cardiac pathology is a nonspecific result of continued antigen-antibody reactions *in vivo*. Others have sought a more specific mechanism and suggest that the antigen is heart tissue or some abnormal derivative of it. Results in this direction were first detected by Coburn and Pauli[9] who found sera from persons in the acute stages of rheumatic fever precipitated with a substance in the blood before the onset of a rheumatic episode. The substance was distinct from C-reactive protein. This work was confirmed independently[10] and at the same time it was suggested this precipitation might result in lowering of the albumin/globulin ratio. However, Fischel and Pauli later questioned some of these results with precipitating rheumatic sera.[11]

In 1937 sera of rheumatic fever patients were found to fix complement with extracts of livers from rheumatic children.[12] However, this was not repeatable later by other investigators.[11] Perhaps the most generally known work in this area is that of Cavelti[13] who coated collodion particles with extracts of human heart and subsequently incubated these particles with rheumatic and normal sera. Of 67 rheumatic fever sera tested, 75 per cent had titers of from 1:40 to 1:320 whereas only one of some 96 normal persons was positive. These heart "antibodies" were present during the early active stages of the disease but were absent during inactive stages or upon recovery. Cavelti also performed similar experiments with sera of rats and rabbits which had been immunized with mixtures of streptococci with rat and rabbit heart respectively.[14] Approximately half of these rabbits developed antibodies. The figures for rats varied from 50 to 85 per cent depending upon the strain. The titers varied from 1:40 to 1:1280. Heart lesions broadly resembling those in human rheumatic fever were identified in the rabbits.[15]

These results were soon disputed by Peck and Thomas[16] who, after immunization of 350 rabbits with rabbit heart-streptococcal mixtures in adjuvant, could never detect complement fixing nor collodion agglutinating antibodies. Furthermore, heart lesions were not detectable either. Humphrey's attempts[17] to duplicate Cavelti's methods but using kidney tissue were unsuccessful. McKee and Swineford[18] also were unable to produce either precipitins or tissue lesions with the streptococci-tissue immunizing mixture. In human sera Fischel and Pauli[11] actually found "heart coated" collodion agglutinating antibodies more commonly in syphilitic than in rheumatic fever sera.

Coating of artery wall extracts upon erythrocytes provided a method for Vorlaender[19] and coworkers[20] to detect autoantibodies in several rheumatic fever patients. In the subchronic stages of the disease antibody was present and in the acute phase antibody was absent so antibodies could be incriminated as the cause of the disease from these studies. As with most other studies an extension to a larger number of cases seems necessary to provide further support of these findings. Rejholec and Wagner[21] and Wagner and Rejholec[22] have reported antibodies to heart and other organs occur in rheumatic patients. They used the collodion coating method of Cavelti and were careful to control their studies for spontaneous agglutination which was observed frequently with certain antigen preparations and also certain sera. The ability of rheumatic sera to agglutinate particles coated with organ extracts other than heart was explainable by an antigen common to the tissues tested.

Also on the positive side of this problem Osler, *et al.*[23] have reported recently that 50 per cent of rheumatic fever sera fix complement with alcoholic extracts of human heart whereas only 20 per cent of syphilitic sera are positive. Thus the existence of agglutinating and complement fixing antibodies to heart tissue in rheumatic fever continues to be controversial with these more recent reports suggesting an affirmative answer.

Support for reinvestigation of the rheumatic fever problem may be taken from recent studies[24, 25, 26] which have concluded an autoantibody is unquestionably associated with some forms of hypothyroidism including Hashimoto's disease. Perhaps the cause for such success among this group is that the antibody (to thyroglobulin) is present in such large amounts but, excepting the precipitin method, they have also chosen serologic methods which measure minute amounts of antibody, i.e., induced or passive hemagglutinations similar to the collodion method, and the passive cutaneous anaphylaxis technic (PCA).[27]

The PCA method is approximately 100 times more sensitive than the complement fixation test and is therefore a worthy test when seeking small amounts of antibody. The test is more simply performed than the collodion or other passive agglutination tests and this provides another advantage in its use. To perform the test, an injection of 0.1 ml. of serum suspected of containing antibody is injected into the skin of a guinea pig. After a four hour waiting period, a mixture of equal parts of antigen and 1 per cent Evans' blue dye is injected directly into the blood stream, intravenously or intracardially. Upon reaction of antigen with antibody in the guinea pig skin, the vascular permeability increases, permitting "leakage" of the dye into the tissue. The area of stained skin is proportional to the amount of antibody injected.

An examination of rheumatic fever sera for heart antibodies by the PCA method is recorded.

*Materials and Methods.*—Sera from rheumatic fever, non-rheumatic patients and normal persons were harvested from clots and antistreptolysin O (ASTO) determinations performed with Difco reagents. C-reactive protein (CRP) was detected by the latex particle method (Hyland) with undiluted sera. The sera were then frozen at −5 C. until used in the PCA test.

Each serum was checked in two different guinea pigs by the PCA test for which the antigen consisted of a supernatant from a 10 per cent homogenate (w/v) of human heart prepared in saline in a Waring blendor and maintained at −5 C. until ready for use.

*Results and Conclusions.*—A total of 38 sera were analyzed although only 36 individuals are represented because of duplicate samples from two individuals. The non-rheumatic group was characterized by low ASTO titers (only two were 333 Todd units or over) and infrequent positive CRP tests. The seven non-rheumatic sera chosen for table 1 were selected to represent the high (sera 1 and 2) as well as the low (sera 6 and 7) ASTO individuals with positive (serum

TABLE 1
IMMUNOLOGIC STUDIES OF RHEUMATIC FEVER AND OTHER SERA

| *Non-rheumatic Sera* | *ASTO* | *CRP* | *PCA* |
|---|---|---|---|
| 1 | 625 Todd | – | – |
| 2 | 333 units | + | – |
| 3 | 166 | – | – |
| 4 | 125 | – | – |
| 5 | 100 | – | – |
| 6 | 50 | – | – |
| 7 | 50 | + | – |
| *Rheumatic Sera* | | | |
| 1 | 1,250 | ++ | – |
| 2 | 1,250 | ++ | – |
| 3 | 833 | – | – |
| 4 | 833 | + | – |
| 5 | 625 | + | – |
| 6 | 625 | – | – |
| 7 | 500 | + | – |

2) and negative (serum 7) CRP tests. Analyses of these sera by the PCA method yielded uniformly negative results.

In the rheumatic fever group high ASTO values were the rule with only four of twenty-one being as low as 250 units. Positive CRP tests were detected for approximately one third of these sera. The disappointing finding of this study was that all the experimental sera were negative in the PCA test.

Previous experience with this test[28] as a measure of small amounts of antibody was successful. Either of the two serologic reactants in the present study could be at fault. Use of normal heart as antigen may be criticized here upon the basis that it does not contain the altered rheumatic heart antigens. Certainly a logical continuation of this work will require examination of rheumatic heart tissue. It is also quite possible that any heart antibodies which may exist, do so only fleetingly, being removed from the patient's blood stream by his own heart tissue as quickly as formed. Vorlaender, *et al.*[20] have detected fluctuations in antibody titer relative to activity of the rheumatic state. Detection of these antibodies would require regular examination of rheumatic fever sera over long periods of time, a factor which was not possible in the present study. Thermolability of the "antibody" even in the deep freezer may also be a factor as suggested by the results of Wagner and Rejholec.[22]

## Summary

A review of the literature on heart tissue as the antigen in rheumatic fever serology has been presented in conjunction with a study of 38 sera by the PCA method for heart antibodies. Potential reasons for failure of the test to detect such antibodies are discussed.

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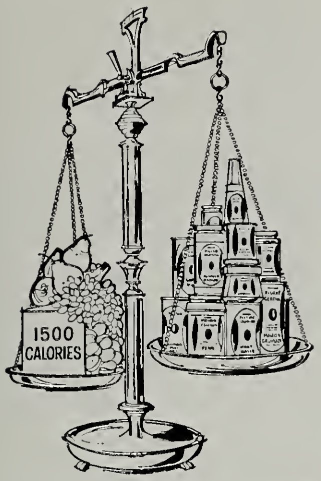

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| Five-Fruit Juice Breakfast Drink | ½ cup | 20 | 52 |
| Braised Beef and Vegetables | 6½ oz. | 184 | 380 |
| Meat Balls in Brown Gravy | 3½ oz. | 84 | 280 |
| Chopped Chicken Livers | 1 oz. | 31 | 100 |
| Chicken a la King | 3 oz. | 72 | 230 |
| French Style Dressing | 1 tbsp. | 10½ | 60 |
| Brown Gravy | 1 tbsp. | 7 | 21 |

| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Applesauce | ½ cup | 48 | 90 |
| Fruit Cocktail | ½ cup | 44 | 90 |
| Cherry Pie Filling | 1 oz. | 20 | 60 |
| Chocolate Topping | 1 tbsp. | 8 | 63 |
| Preserves (Peach, Strawberry) | 1 tbsp. | 9 | 55 |
| "Maplette" Syrup | 1 tbsp. | 9 | 55 |
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Donald M. Dowell, M.D.

# President's Message

The coming national elections—the primaries in August and the general election in November—may well be the most important to medicine in the history of this country.

These elections will determine the composition of the next Congress—whether those who concur in medicine's point of view will be in the majority, or whether they will be overwhelmed by the supporters of a welfare state, Social Security medicine and control by an all powerful Federal government. One-third of the seats in the Senate are at stake, along with the entire membership of the House.

You can exert a powerful influence for the medical profession's position in these elections, not only in Missouri but throughout the nation as well. The way is through MMPAC, the Missouri Medical Political Action Committee.

The function of MMPAC, in coordination with the American Medical Political Action Committee on a national level, is to promote political understanding and education and to support those candidates, regardless of party affiliation, who reflect medicine's stand on essential issues.

You have already received information about MMPAC from Dr. Ralph Perry, its chairman. While minimum dues for membership are $25, of which $10 is sent to AMPAC, larger contributions are welcome and badly needed.

The fundamental issue is freedom of medical practice, for the patient and for the physician. Your dollars and your efforts through MMPAC can help preserve that freedom. Send your contribution and membership application today to MMPAC, James C. Sisk, M.D., Secretary-Treasurer, 605 Landreth Building, 320 North Fourth Street, St. Louis 2, Missouri.

D. M. Dowell, M.D.

# EDITORIAL

## AMERICAN MEDICAL ASSOCIATION'S 111TH ANNUAL CONVENTION—CHICAGO, JUNE 24-28

"Medicine in the Atomic Age" is the theme of the American Medical Association's 111th annual convention which will be held at McCormick Place in Chicago, June 24-28. McCormick Place is the newly erected convention headquarters in the City of Chicago.

In support of that theme, a special half-day program entitled "Nuclear Medicine—Present Achievements and Future Promise," will be presented on Tuesday morning, June 26, under sponsorship of the A.M.A. Council on Scientific Assembly.

Program chairman is Dr. Lee E. Farr, of the Brookhaven National Laboratories, Upton, New York, a member of the Council, and the moderator will be Dr. Stuart W. Lippincott, also of Brookhaven.

With more than 500,000 medical patients a year in the United States now receiving radioactive tracers for diagnostic purposes and with another 100,000 getting isotope radiation therapy, radioisotopes can no longer be considered curiosities.

The total quantity of radioisotopes sold to industrial and research organizations in the United States by the Atomic Energy Commission over the past 15 years has amounted to about 1,300,000 curies of radioactivity. This year alone U. S. users are expected to buy more than 2,000,000 curies worth.

### Research Forum

More than 200 of the nation's top scientists, representing a cross-section of nearly every medical specialty, will present new and original papers at 12 different sessions.

The papers, which will be offered on Tuesday, Wednesday and Thursday, June 26-27-28, at McCormick Place, are part of a new Research Forum, sponsored by the A.M.A. Council on Scientific Assembly. The Forum was held for the first time at the A.M.A. New York session last June.

After reviewing hundreds of scientific manuscripts, a committee headed by Dr. Edwin H. Ellison, of Marquette University School of Medicine, Milwaukee, has completed selection of participants for the Forum program. Selections were based primarily on quality and timeliness of the author's original investigation.

The Research Forum idea was conceived because A.M.A. Council members felt that it would attract and bring together a variety of top research workers from many specialty areas who have a mutual interest in common medical problems.

This year a three-man panel of experts is being chosen for each of the 12 sessions to discuss the presentations.

Subjects to be covered the first day—Tuesday—will be cancerous growths and peptic ulcer and other problems related to the stomach. The second day, Wednesday, will be devoted to heart disease and transplantation of tissue and organs as well as rheumatic and muscle diseases. On Thursday, the third day, the participants will discuss liver diseases and anesthesia as well as diseases causing abnormally low body temperature.

### Problems of Teenagers

Problems of today's teenagers, threatened by domestic and social forces and swept along on a treadmill of fads, gangs, school spirit, keeping-up-with-the-Joneses, and fear of social criticism, will be discussed during a full-day's scientific session.

The physical aspects of puberty and adolescence, teenage problems in boys and girls and the social influences on adolescent behavior will be covered by a panel of experts on Thursday morning, June 28.

Subjects to be discussed at the afternoon session include the teenager and physical fitness, teenager skin problems, teenager orthopedic problems, gynecologic problems in teenagers and the psychiatric implications of the teenagers' problems.

### Many Other Topics

Those described, as well as many other topics, will be presented at this 111th Annual Meeting.

# Ramblings of the Field Secretary

Thirty-five physicians from the 10th Councilor District of the Missouri State Medical Association attended a dinner meeting arranged by the Butler-Ripley-Wayne County Medical Society on Wednesday night, April 18. This signal affair was held at the new Holiday Inn on the outskirts of Poplar Bluff.

Following a delicious smorgasbord dinner those fortunate enough to be present were privileged to hear a most interesting and informative discussion by Robert G. Bloch, M.D. of New York City.

Dr. Bloch spoke on "Bronchitis and Bronchiectasis" and by the time he finished had yours truly thinking in terms of a one-way ticket to Arizona. The Speaker is Chief of the Division of Pulmonary Diseases at Montefiore Hospital, New York City, and Clinical Professor of Medicine at Columbia University Medical School in New York. His speaking engagement on this occasion was scheduled through the courtesy of Dr. E. M. Tapp, physician in charge of the VA Hospital in Poplar Bluff.

Informal discussion followed meeting.

Dr. English, Councilor, Drs. Tapp and Bloch, and Dr. Hansbrough, president.

Dr. Bloch was spending a few days at the hospital as an official consultant on pulmonary diseases under the VA Consultant Program.

The West Central Missouri Medical Society has scheduled an attractive meeting at the Country Club in Nevada for Thursday night, June 14. The program will be centered on medical-legal problems and will be developed and directed by Charles B. Wheeler, M.D., LL.B., pathologist, Kansas City General Hospital. Dr. Wheeler will have two members of the Vernon County Bar Association participating with him on the program. Lawyers from the area will also be invited to this meeting. The evening festivities will begin with a social hour at 6:30 p.m., followed by dinner and then the formal program.

The Missouri State Medical Foundation is pleased to accept any large or small contributions these days to assist some deserving Missouri boy or girl complete his or her four-year medical school course. The need for this assistance is concrete.

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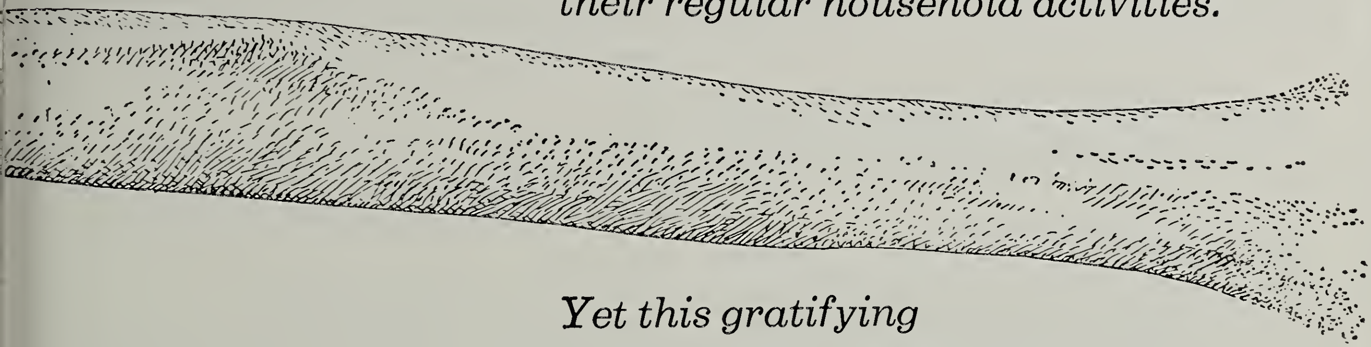

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# News—Personal and Professional

**Omer E. Hagebusch,** M.D., St. Louis, was quoted in *Medical World News* "The Cardinal Principle which we have to get over is that lab work is the practice of medicine."

**E. M. Lucke,** M.D., Hannibal, Marion County health officer, stressed the importance of immunization for school children, at a PTA meeting, April 2.

**Carl Siegel,** M.D., Sedalia, discussed civil defense at a meeting of nurses in Marshall, April 17.

**William M. Kitchen,** M.D., Kansas City, was named president of the Club President's Round Table at a meeting in Kansas City.

**Louis T. Byars,** M.D., St. Louis, was elected president of the Barnes and Allied Hospitals Society; other officers include **Ernest T. Rouse,** M.D., V.P., **Ralph Gieselman,** M.D., Secretary-Treasurer.

**J. S. Sanders,** M.D., Jefferson City, discussed the Medical Self-Help Program at a meeting of the Memorial Community Hospital Auxiliary in Jefferson City, April 9.

**Vernon Wilson,** M.D., Columbia, spoke recently at the Buchanan County Auxiliary meeting, St. Joseph. "Challenges in Providing Health Services" was the subject of his talk.

**J. S. Spratt Jr.,** M.D., of the Ellis Fischel State Cancer Hospital staff, will present two papers at the 8th International Cancer Congress in Moscow, Russia, in July.

Congressman **Durward G. Hall,** M.D., Springfield, was a speaker at the Florida Medical Association meeting, Miami Beach, May 10-13.

**Edward Massie,** M.D., St. Louis, and **Alfred Goldman,** M.D., St. Louis, appeared on the program of the annual meeting of the Oklahoma State Medical Association, in Oklahoma City, early in May.

**David State,** M.D., New York, Professor and Chairman of the Department of Surgery, Albert Einstein College of Medicine, spoke at the Menorah Medical Center's Twelfth Annual Memorial Lecture, May 17, in Kansas City. The subject was "Physiologic and Clinical Studies in Autoregulation of Gastric Resection."

**Donald M. Dowell,** M.D., Chillicothe, delivered the welcoming address at the A.M.A. Blue Shield Regional Conference in St. Louis, April 14. The conference was sponsored by the A.M.A. Committee on Insurance and Prepayment Plans. **R. O. Muether,** M.D., St. Louis, participated in a panel discussion at the same conference.

**Paul F. Max,** M.D., St. Louis, received an alumni achievement award at the annual Founders Day Convocation at Westminster College, in late April.

The American Medical Women's Association extends an invitation to all women physicians attending the A.M.A. Annual Meeting in Chicago, to be their guests at a brunch on Sunday, June 24, 1962, at 11:00 A.M. at the Essex Inn.

## DEATHS

**Roberson, John H.,** M.D., Lilbourn, a graduate of Kansas University, 1897; member of Semo County Medical Society; aged 90; died March 17, 1962.

**Border, Charles T.,** M.D., 2206 Sylvan, Garland, Texas, a graduate of the University of Kansas, 1910; member of Jackson County Medical Society; aged 81; died March 31, 1962.

**Gundlach, Arthur,** M.D., Creve Coeur, a graduate of Washington University, 1906; member of St. Louis Medical Society; aged 80; died April 3, 1962.

**Dripps, Roy C.,** M.D., 5210 Jamieson, St. Louis, a graduate of Marquette University, 1919; member of St. Louis Medical Society; aged 72; died April 4, 1962.

**Curran, Kevin E.,** M.D., 1228 Baltimore, Kansas City, a graduate of Kansas University, 1933; member of Jackson County Medical Society; aged 60; died April 8, 1962.

**Rotter, Julius C.,** M.D., 3359 S. Jefferson, St. Louis, a graduate of St. Louis University, 1913; member of St. Louis Medical Society; aged 73; died April 11, 1962.

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# New Members

**James B. Allison,** M.D., 1636 S. Glenstone, Springfield, has become a member of Greene County Medical Society. Dr. Allison is a native of Texas, received his preliminary education at Mid-West University, and his M.D. degree at the University of Texas in 1957.

**Jobutaka Azuma,** M.D., 4119 Potomac, St. Louis, has become a member of St. Louis Medical Society. Dr. Azuma is a native of Tokyo, Japan, received his preliminary education at College of Liberal Arts, University of the Philippines, and his M.D. degree at the University of the Philippines College of Medicine, Manila, Philippines in 1941.

**Ralph H. Bender,** M.D., 721 Radcliffe, St. Louis, has become a member of St. Louis Medical Society. Dr. Bender is a native of Massachusetts, received his preliminary education at Harvard University, and his M.D. degree at Tufts University in 1955.

**David O. Dobrow,** M.D., 7114 Horner, St. Louis, has become a member of St. Louis Medical Society. Dr. Dobrow is a native of California, received his preliminary education at the University of California at Los Angeles, and his M.D. degree at the University of California in 1953.

**Gerald J. Duling,** M.D., 1319 Grant, St. Louis, has become a member of St. Louis Medical Society. Dr. Duling is a native of Ohio, received his preliminary education at Xavier University, and his M.D. degree at St. Louis University in 1959.

**R. A. Eastwood,** M.D., 1715 Boonville, Springfield, has become a member of Greene County Medical Society. Dr. Eastwood is a native of Oklahoma, received his preliminary education at Memphis State University, and his M.D. degree at the University of Tennessee in 1952.

**Alvin R. Frank,** M.D., 7500 York, St. Louis, has become a member of St. Louis Medical Society. Dr. Frank is a native of Illinois, received his preliminary education at Purdue University, and his M.D. degree at the University of Illinois in 1953.

**Vincent L. Frederick,** M.D., 601 S. Brentwood, St. Louis, has become a member of St. Louis County Medical Society. Dr. Frederick is a native of Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1957.

**Tex E. Fury,** M.D., 642 Huntington Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Fury is a native of Kansas, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1950.

**Bela I. Hatfalvi,** M.D., 15 Middlesex Dr., St. Louis, has become a member of St. Louis Medical Society. Dr. Hatfalvi is a native of Hungary, received his preliminary education at Baccalaureat, and his M.D. degree at M. Kir. Tisza-Istvan-Tudoman yegretem, Debrecen, Hungary in 1938.

**Paul A. Hein, Jr.,** M.D., 508 N. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Hein is a native of Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1958.

**Raymond M. Keltner, Jr.,** M.D., 4411 Forest Park, St. Louis, has become a member of St. Louis Medical Society. Dr. Keltner is a native of Missouri, received his preliminary education at Drury College, and his M.D. degree at Washington University in 1957.

**William J. Kennedy,** M.D., 6815 Bradley, St. Louis, has become a member of St. Louis Medical Society. Dr. Kennedy is a native of Nebraska, received his preliminary education at the University of South Carolina, and his M.D. degree at St. Louis University in 1958.

**Don E. Menchetti,** M.D., 1630 N. Jefferson, Springfield, has become a member of Greene County Medical Society. Dr. Menchetti is a native of Kansas, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1957.

**Julio Montes-de-Oca,** M.D., 6115 Clayton, St. Louis, has become a member of St. Louis County Medical Society. Dr. Montes-de-Oca is a native of Costa Rica, received his preliminary education at Omar Dengo College, San Jose, Costa Rica, and his M.D. degree at the University of Mexico in 1955.

**James S. Nelson,** M.D., 7361 Dale, St. Louis, has become a member of St. Louis Medical Society. Dr. Nelson is a native of Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1957.

**Robert G. Powell,** M.D., 2329 Jackson Street, Joplin, has become a member of Jasper County Medical Society. Dr. Powell is a native of Kansas, received his preliminary education at Kansas

State College, and his M.D. degree at the University of Kansas in 1944.

**H. O. Rappold,** M.D., 111 Church St., St. Louis, has become a member of St. Louis Medical Society. Dr. Rappold is a native of Germany, received his preliminary education at the University Medical School, Wuerzburg, Bavaria, Germany, and his M.D. degree at University Medical School, Wuerzburg, Bavaria, Germany in 1952.

**Carle H. Schroff,** M.D., 1630 N. Jefferson, Springfield, has become a member of Greene County Medical Society. Dr. Schroff is a native of Missouri, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1959.

**Wallace Stuart,** M.D., 1501 S. 12th St., St. Louis, has become a member of St. Louis Medical Society. Dr. Stuart is a native of Pennsylvania, received his preliminary education at the University of South Carolina, and his M.D. degree at St. Louis University in 1959.

**Kenneth E. Waddell,** M.D., 1211 S. Glenstone, Springfield, has become a member of Greene County Medical Society. Dr. Waddell is a native of Missouri, received his preliminary education at Missouri Valley College, and his M.D. degree at Missouri University in 1956.

**Carol F. Williams,** M.D., 40 N. Maple, St. Louis, has become a member of St. Louis Medical Society. Dr. Williams is a native of Tennessee, received her preliminary education at Vanderbilt University, and her M.D. degree at Tennessee University in 1955.

**Warren J. Wimmer,** M.D., Northland Medical Building, St. Louis, has become a member of St. Louis Medical Society. Dr. Wimmer is a native of Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1957.

## WOMAN'S AUXILIARY

*(Continued from page 490)*

owe a vote of thanks to Esther for her loyalty and her willingness to step in where she is most needed.

As soon as the new national materials become available following convention, each state chairman will be urged to use it to the best advantage in promoting state-wide programs on the County level.

No matter what the project you are most interested in, make its dimensions important enough to stir the imaginations of all your members. For instance, a program on Safety may sound uninspired. But put it in the terms of human lives and the alleviation of misery and it assumes its proper perspective. Working for legislation to be passed by the states requiring all automobiles to be factory-equipped with seat belts can become a tremendously important project when we read in the *AMA News* that of the 376 persons killed in auto accidents in Wisconsin (after the passage of such a law) only one was wearing a seat belt.

Mrs. William G. Thuss of Birmingham, Alabama, who will assume the National presidency during the Chicago meeting, has given all the state presidents a preview of her plans in a letter sent out recently. She states that national projects are designed for use by large or small groups. Some are more urgent than others, but only the individual auxiliary can determine which ones are best suited to its local needs. Mrs. Thuss concludes by saying that whether an auxiliary chooses one or all of these projects on which to work, it should "AIM FOR EXCELLENCE IN ACHIEVEMENT."

With this theme in mind for the coming year, I'm sure we will all promise ourselves to make the most of each project we attempt.

# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Grand River Medical Society

The regular monthly meeting was held at the Strand Hotel in Chillicothe, April 12, 1962. Members and the Auxiliary enjoyed a social hour and smorgasbord dinner. Introduction of guests preceded the separate programs for doctors and the auxiliary.

The medical speaker for the evening was Robert K. Skillman, M.D., internist of Kansas City, whose subject "Hematological Manifestation of Diseases" was followed by a question and answer period.

Subjects discussed at the business meeting were the Corporate Practice of Medicine, programs for the coming months, and the successful financing of the hospitality room in St. Louis.

Guests present in addition to Dr. Skillman were Mr. Bill Busenbark of Pitman Moore and Jim Nisely of Robins whose catering service was universally appreciated.

Frank R. Daley, M.D., *Secretary*

### Buchanan County Medical Society

Michael J. Brennan, M.D., Physician-in-Charge of the Department of Oncology of Henry Ford Hospital in Detroit was the speaker at the April 4 meeting of the Buchanan County Medical Society in the Oak Room of Hotel Robidoux. Annually in April the society has a program on cancer as part of Cancer Control Month.

Dr. Brennan spoke on "The Practical Selection of Management Procedures in Disseminated Cancer." In his talk, well-illustrated with slides, the speaker discussed the various methods of treatment, chemotherapy, hormonal therapy, radiation and surgery and the appropriate conditions when the different procedures should be used. Treatment for the same type of neoplastic disease would be different for different age groups, Dr. Brennan pointed out, particularly in women of premenstrual and postmenstrual ages.

Fifty-five doctors and their wives attended from Northwest Missouri and Northeast Kansas. Dr. John R. Forgrave, president, presided. The speaker was introduced by Dr. Charles R. Willman, program chairman.

Herbert C. Senne, M.D., *Secretary*

## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### Chariton-Macon-Monroe-Randolph County Medical Society

A meeting of the Chariton-Macon-Monroe-Randolph County Medical Society was held for the first time in the new Woodland Hospital Clinic Building Library in Moberly on Thursday night, April 19. Broda O. Barnes, Ph.D., M.D., of Denver, Colorado, a specialist in cardiovascular disease, was the featured speaker for the evening. Dr. Barnes was accompanied on this special trip to Moberly by Mrs. Barnes. For the past 16 years he has been giving special study to the relationship of thyroid and blood cholesterol to coronary heart disease.

Members present were: Drs. Thomas S. Fleming, J. Will Fleming Jr., C. C. Cohrs, C. C. Smith, S. R. Szymanski, A. P. Rowlette, R. H. Young, Robert Hasson, W. D. Chute, L. E. Huber, and P. V. Dreyer, Randolph County; G. C. Rice, F. L. Harms, D. D. Stuart, Chariton County; F. A. Barnett and G. M. Ragsdale, Monroe County; Gretchen Collins, Carl Rinker, D. E. Eggleston, James E. Campbell and Howard Miller, Macon County.

Guests present were: Dr. William Shaw of Fayette, Dr. Leopold Lachance of Centralia, and Dr. Edward Drace of Keytesville.

J. Will Fleming, M.D., *Secretary*

### Marion-Ralls-Shelby County Medical Society

A dinner meeting of the Marion-Ralls-Shelby County Medical Society was held Tuesday night, April 17, at the Moose Lodge in Hannibal. The scientific program for the evening was presented by Thomas W. Burns, M.D., Associate Professor of Medicine at the University of Missouri Medical Center at Columbia. Dr. Burns spoke on "Recent Advances in the Management of Thyroid Diseases." His was an interesting and informative discussion which stimulated a good general discussion including members of the audience following the formal talk.

Wyeth Hamlin, M.D., *Secretary*

## FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Lincoln-St. Charles County Medical Society

James P. Murphy, M.D., Department of Internal Medicine, St. Louis University Medical

School, spoke at a dinner meeting of the Lincoln-St. Charles County Medical Society at the Southern Air in Wentzville on Tuesday evening, March 27. Dr. Murphy discussed the subject, "Acute Pericarditis."

**Dr. Murphy, third from left, continued informal discussion.**

The evening festivities began with a social hour followed by dinner and then the well received talk by Dr. Murphy.

V. P. Muenster, M.D., *Secretary*

### Meeting of April 5

A joint meeting of the Lincoln-St. Charles and Franklin-Gasconade-Warren County Medical Societies was held at the Mallinckrodt Chemical Works, Uranium Division, Weldon Spring, Mo., on Thursday night, April 5. The two societies were guests of the Mallinckrodt Company and were privileged to spend an interesting and informative evening at the Weldon Spring Division.

Following dinner a film was shown entitled "Production of Uranium Metal," followed by discussions on "Community Aspects of Health Safety Programs at Weldon Spring," and "Weldon Spring Medical-Health Program."

The final part of the evening program consisted of a plant tour.

V. P. Muenster, M.D., *Secretary*

## FIFTH DISTRICT

BYRON M. STUART, BOONVILLE, COUNCILOR

### Audrain, Callaway, Montgomery County Medical Societies

**The program followed dinner.**

A joint dinner meeting of the Audrain, Callaway and Montgomery County Medical Societies was held Tuesday night, April 24, at the Country Club in Mexico. The evening festivities began with a social hour followed by dinner and then an excellent scientific program was presented by Dr. Everett R. Lerwick and Dr. Cesar Gomez of St. Louis who discussed, "Improvements and New Methods in Vascular Surgery." The presentation was illustrated by a good set of slides and a lively question and answer period followed the formal presentation. Fifteen physicians from the area were present for this interesting and informative occasion.

**Speaker Lerwick, center, continues discussion.**

Anthony Ziegler, M.D., *Secretary*

## SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

### West Central Missouri Medical Society

The April meeting of the West Central Missouri Medical Society was held on the evening of the 12th of April, 1962, at the Wagon Wheel Cafe at Harrisonville, Missouri. A social hour preceded the meeting proper. Following a steak dinner, served by the management in their usual fine style, the scientific portion of the program was presented.

President, Dr. Donald Giesler, presented Dr. Wallace Greene, surgeon, Kansas City, who talked to us on "Gastro-Intestinal Bleeding." Dr. Greene presented a most interesting discussion of the subject, covering the usual causes of gastro-intestinal bleeding, and spent considerable time on the diagnosis and clinical work-up of these patients and then went into the management of these bleeding episodes. He had a number of good slides of x-rays of these conditions and also some in color of specimens removed at surgery showing them in their pathological state. This was a most interesting presentation on this important subject. We were very much pleased and are grateful to him for his very nice presentation.

Following this presentation, Dr. Barger, our Councilor, discussed the AMPAC organization, a newly organized group formed to produce some political endeavors by doctors themselves on the current problems of legislation.

Dr. Giesler reported on the activities of the house of delegates at the March state meeting in St. Louis and was much disturbed that we had no more representation from our five counties, making up this society, than we did. The influence of the rural doctor is in the House of Delegates, but to exert influence every county component needs to have a delegate there to vote on the various issues presented before the House of Delegates.

We were sorry that there were so few attending our April 12 meeting. It was a fine program but with such a poor turnout it becomes rather embarrassing to the program committee, as has been mentioned many times before. Those present were: Dr. and Mrs. Giesler, Osceola, and Mr. Herbert Inglove of the MU Medical School, who has been serving a preceptorship with the Tri-County Clinic in Osceola the last six weeks; Dr. and Mrs. O. B. Barger and Dr. and Mrs. Jack Moody of Harrisonville; Dr. A. W. Ecklund of Pleasant Hill and Dr. C. W. Luter of Butler. This was our smallest turnout in months.

The meeting was adjourned until the May meeting in Butler, which will be held at Glenn's Cafe, west side of the highway, midway through Butler on U. S. 71. The program will be given by the MSMA Maternal Welfare Committee for this area.

Carter W. Luter, M.D., *Secretary*

## Lafayette-Ray County Medical Society

The March meeting of the Lafayette-Ray County Medical Society was held March 13, 1962 at the Maibs' Cafe in Lexington, Mo. Dinner was served following a social hour.

President George Davault, M.D., called the meeting to order. A film was shown concerning the latest studies on "Enovid" by a representative of the G. D. Searle and company. An informal discussion followed the film.

The meeting adjourned.

Wayne Boydston, M.D., *Secretary*

### April 10 Meeting

The April meeting of the Lafayette-Ray County Medical Society was held April 10, 1962 at Maibs' Cafe, Lexington, Mo. Dinner was served following a social hour.

President George Davault, M.D., announced that no scientific program had been scheduled because of the large number of members that were away to various medical meetings.

The meeting adjourned.

Wayne Boydston, M.D., *Secretary*

## Pettis County Medical Society

The Pettis County Medical Society met immediately after the medical staff meeting, March 6, 1962, with Dr. John Lamy, President, presiding.

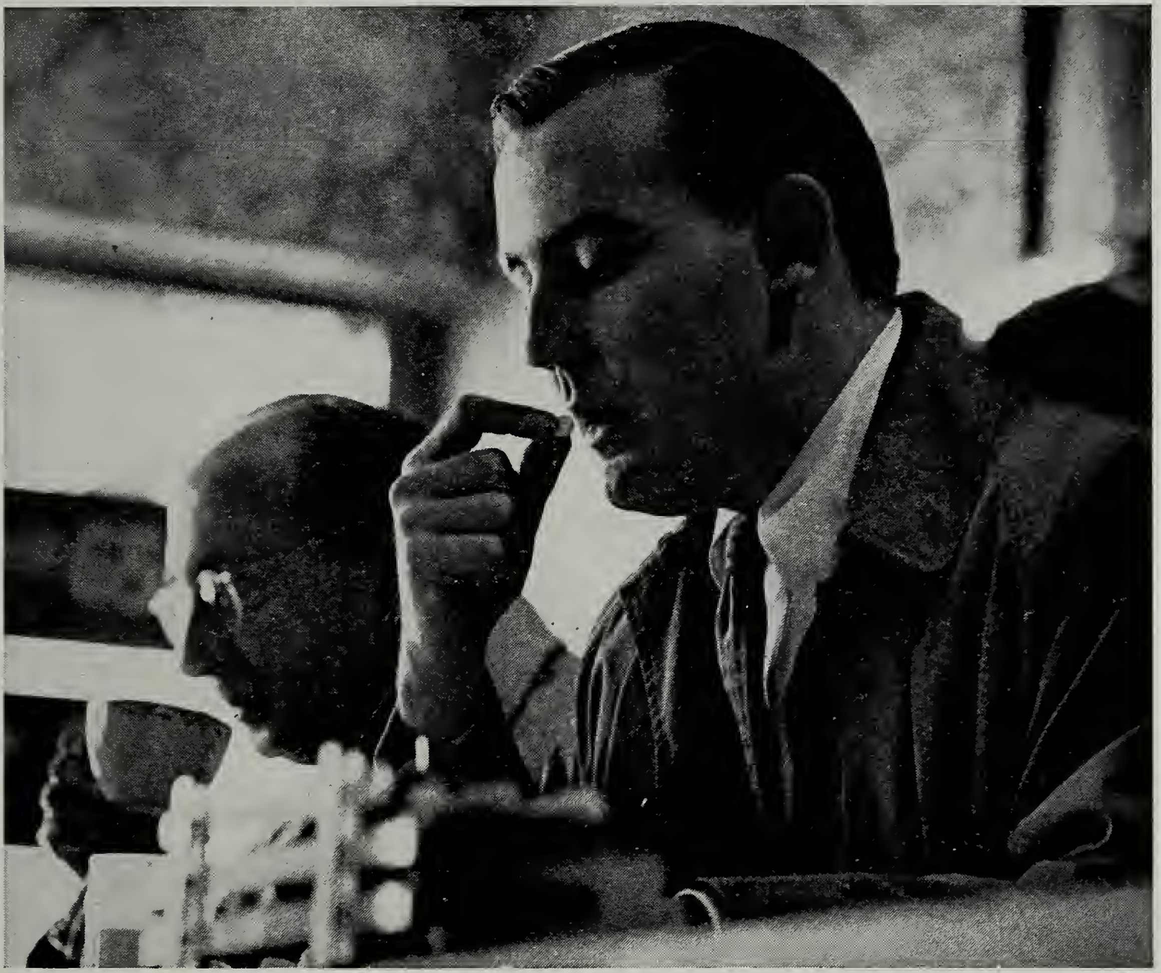
After an explanation of the Eye Tissue Bank Program by the president, which is sponsored by the Missouri University Medical Center, the society voted favorably to approve the proposal and cooperate in every way to make it a success.

On motion by Dr. Brady, and seconded by Dr. Campbell, Dr. John C. Brazos, urologist from Illinois and who is now practicing in Smithton and Sedalia, was received as a member of the Society.

By common consent, our delegate to the State Convention, Dr. Gordon Stauffacher, was uninstructed and he is to use his better judgment whenever voting on different propositions.

The society agreed to submit the name of Dr. A. L. Lowe, as a candidate from this district to serve as a member of the Board of Directors of the Blue Shield.

A letter was read from the Blue Cross and Blue Shield in reference to the national program for senior citizens, a proposal for a medical care program for people over the age of 65, sponsored jointly by the American Medical Association and Blue Shield. After lengthy discussion, Dr. Boger made a motion which was seconded



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by Dr. Stewart, voted and carried, that the society approve this program and support it to the utmost.

No further business the meeting was adjourned.

Albert R. Maddox, M.D., *Secretary*

## EIGHTH DISTRICT

DOYLE C. McCRAW, BOLIVAR, COUNCILOR

### Greene County Medical Society

The regular meeting of the Greene County Medical Society was held Friday, March 23, 1962 at the Holiday Inn, 6:30 p.m., with 46 members and two guests present. The minutes of the February 23, 1962 meeting of the society were approved as published in the *Bulletin.*

Dr. F. T. H'Doubler Jr., Chairman of the Emergency Medical Service Committee, discussed in detail the simulated disaster exercise schedule for Tuesday, March 27, 1962 which is designed to test emergency medical service plans of the society and the community hospitals. Members of the society were urged to participate in this exercise.

The President, Dr. Peterson, reported that a special meeting of the society will be held to permit further demonstration of the Radio Paging System designed by Motorola. The meeting is scheduled for early April and Dr. Peterson urged all those interested to be present since a lack of interest at this point will terminate further society exploration of this project.

A 33-minute motion picture showing selected highlights of the lectures, exhibits and discussions of the scientific program at the 110th Annual Meeting of the American Medical Association in New York was then shown. The picture was produced by the Schering Corporation and the American Medical Association. Following this presentation, Dr. Peterson urged members of the society to attend the AMA Annual Session scheduled for June 24-28, 1962 in Chicago and to participate in both the scientific sessions and the House of Delegates deliberations.

Dr. Doyle McCraw, Eighth District Councilor, and Drs. Peterson and Knabb, two of our Delegates, presented a report on the 104th Annual Session of the Missouri State Medical Association.

Following a question and answer period, Dr. Glenn Turner discussed the formation of the Missouri Medical Political Action Committee and the opportunity was presented for members to actively participate in this organization. It was explained that this organization has its own officers, elected during the annual session, and is separate from the Missouri State Medical Association. Dr. Robert Maher discussed the scientific program at the annual session and upon motion by Dr. Maher, seconded by Dr. H'Doubler, the society voted to express commendation to Dr. Matthews and his committee for their excellent work.

There being no further business, the meeting was adjourned.

Francis M. Maple, M.D., *Secretary*

## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid-Missouri County Medical Society

A dinner meeting of the Mid-Missouri Medical Society and the doctors' wives was held at the Baxter Restaurant in Rolla on Thursday night, April 26. Invited guests were physicians and their wives, members of the Fort Leonard Wood Clinical Society. The scientific program of the evening was presented by Richard Yore, M.D., St. Louis, Department of Surgery, Washington University School of Medicine, who spoke on "Recent Advances in the Diagnosis and Management of Acute Injuries of the Chest."

M. K. Underwood, M.D., *Secretary*

## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Mineral Area County Medical Society

A meeting of the Mineral Area County Medical Society was held at the State Hospital in Farmington on Thursday night, April 26. The program for the evening was presented by Seymour Monat, St. Louis, Assistant Professor of Clinical Obstetrics and Gynecology, Washington University School of Medicine and Chief of Staff and Director of the Department of Obstetrics and Gynecology, Homer Phillips Hospital, who spoke on "Bacterial Shock."

A lively question and answer period followed the presentation of this interesting subject.

Paul Dennis, M.D., *Secretary*

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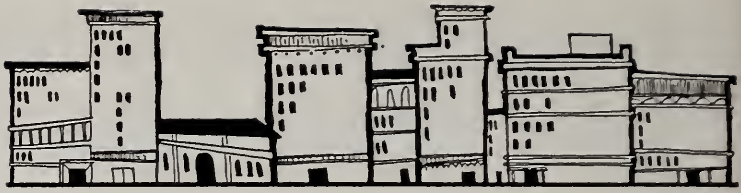
# From the Medical Schools



## WASHINGTON UNIVERSITY

### Cyclotron to Be Installed

Dr Michel M. Ter-Pogossian, professor of radiophysics at Washington University School of Medicine, has been awarded a four-year grant of $328,000 from the United States Public Health Service for construction and maintenance of a cyclotron in the Washington University Medical School and Associated Hospitals Medical Center. In announcing the grant Dean Edward W. Dempsey said that this will be the first and only cyclotron in operation in a medical center in the United States for the production of short-lived isotopes, and one of the few in the world that will be used entirely for biological and clinical investigative work. As grant recipient, Dr. Ter-Pogossian will be chief investigator and administrative director of all projects relating to the new cyclotron. Cooperating in the cyclotron project will be the department of surgery with Dr. John Spratt as co-investigator. Dr. Spratt, chief surgeon at the Ellis Fischel State Cancer Hospital, Columbia, is on leave of absence from his appointment in the department of surgery at the present. Primary use of the instrument will be the production of selected radioactive isotopes for use in clinical work with patients and as investigative tools. It will be assembled over the period of a year in a 25 × 20 foot room in Barnard Free Skin and Cancer Hospital. Dr. Dempsey said that this location is especially important as it will permit the use of isotopes in cancer patients and in the Clinical Research Center, also located in Barnard Hospital.

Among the more important isotopes produced will be oxygen-15, used in the studies of heart disease, lung function, blood circulation and oxygenation of various organs under normal and pathological conditions, and carbon-11 used in external carbon tracing. During the past five years, the cyclotron on the main campus of Washington University has been used by Dr. Ter-Pogossian and other members of the departments of radiology and surgery in carrying out preliminary studies on oxygen-15. The main campus cyclotron, one of the first in the United States, was originally constructed by the Mallinckrodt Institute of Radiology and used for medical research. At the beginning of World War II it was used in the early pilot work of the Manhattan project, which later led to the production of the atomic bomb. This original instrument will continue to be used by the physics department of the university.

### Surgery Laboratories Dedicated

The Flora and Harry Freund Laboratories of Surgical Research at Washington University School of Medicine were dedicated last month. Mr. S. E. Freund, son of Mrs. Flora D. Freund and the late Mr. Harry Freund, has given a gift to the department of surgery which enabled the completion and which has provided equipment and facilities for surgical research on the ninth and tenth floors of the David P. Wohl Jr. Memorial-Washington University Clinics. In announcing the completion of the laboratories, Dr. Carl A. Moyer, Bixby professor and head of the department of surgery, said that Mrs. Flora D. Freund, Mr. S. E. Freund and the Harry Freund Memorial Foundation had supported research in the department of surgery for the past nine years. “This research has been concerned with the elucidation of the biologic effects of burns on the skin and other tissues,” Dr. Moyer said. “This work has already led to material improvements in the treatment of badly burned people.” In conjunction with this research one feature of the new laboratories is a specially filtered bath that permits better care of badly burned people. Specialized facilities for surgical research on the ninth floor include a laboratory with equipment necessary for the use of radioisotopes; a laboratory equipped for the study of immunology, especially as it relates to cancer and transplantation of tissue; a modern inorganic chemical analytical laboratory; a clinical laboratory containing such equipment as an infrared spectrophotometer and other equipment necessary for the identification and isolating of organic compounds, especially of hormones; an electron microscope that is to be used for the development of better means of identifying various types of tumors and a laboratory fitted for the microchemical study of enzymes in human tissues. The tenth floor contains a modern animal operating room, air-conditioned quarters for 100 large animals and 1,000 small animals and equipment for washing and sterilizing animal cages. Two laboratories that are completely shielded with copper from electrical disturbances permit investigation with extremely sensitive electrical means of nervous and muscular activities in men and animals. Also on the tenth floor is a temperature and humidity controlled room fitted for the study of metabolism under various environmental circumstances.

### Lectures

The Barnard Lecture was reestablished in April with Dr. A. G. Oettlé, head of the Cancer Research Unit of the South African Institute for Medical Research, Johannesburg, as speaker for 1962. The lecture was presented by Barnard Free Skin and Cancer Hospital from 1939 to 1944 bringing leaders in cancer research to speak in St. Louis. Dr. Oettlé's topic was Cancer in Africa and Opportunities in Geographical Pathology.

Dr. Robert H. Williams, professor of medicine at the University of Washington School of Medicine, presented the 27th annual Leo Loeb Lecture. Dr. Williams discussed recent advances in diabetes and lipid metabolism.

Dr. Arthur Kornberg, 1959 Nobel Prize winner and head of the department of biochemistry at Stanford University, delivered the 5th annual Philip A. Shaffer Lecture. He spoke on his prize winning work in genetics on the enzymatic synthesis of DNA. Dr. Kornberg was formerly head of the department of microbiology at Washington University.

### Student Awards

Ten seniors and six juniors have been elected to membership in Alpha Omega Alpha. Senior students are Whit Carhart, Lake Jackson, Texas; Pedro Cuatrecasas, Washington, D. C.; Scott Dietert, Houston; Robert Edelman, St. Louis; Donald Kestle, Seattle; John Kiser, Wichita; Stuart Kornfeld, St. Louis; Richard Provines, Olney, Ill.; Barbara Shaw, Temple City, Calif., and Edward T. Stewart, St. Louis. Junior students are Joseph Loewenstein, Port Arthur, Texas; David Nelson, St. Paul; James Murdock, St. Louis; Patrick O'Donoghue, Oklahoma City; Robert Swenson, Chicago, and Robert Waldman, Dallas. Senior members elected in their junior year are David Danoff, Baltimore; Leonard Jarett, Lubbock, Texas; Raymond Ritter, Jr., Cape Girardeau, and Jay Smith, Grand Island, Neb.

Leonard Jarett, senior student, has been selected as one of six students throughout the United States to receive a 1962 Sheard-Sanford Prize by the American Society of Clinical Pathologists. The award was made for a research project on "The Effect of Glucagon on the Protein Synthesis of the Pancreas and Liver." The work was done in the department of pathology at Washington University during Jarett's undergraduate training.

## UNIVERSITY OF MISSOURI

### Meetings at the Medical Center

The behavioral aspects of mass disaster and the survival expectancies in the event of a thermonuclear attack provided the two phases of discussion at a Seminar on Disaster and Survival held at the Medical Center April 19. A highlight of the seminar was the presentation of opposing views on the possibility of a major part of the population surviving a thermonuclear attack.

Guest speakers included: Dr. Milton A. Dushkin, Medical Director, North Shore Hospital, Winnetka, Ill.; Alice G. Gillen, Chief Casework Supervisor in Disaster Services, American National Red Cross, Midwestern Area, St. Louis, Mo.; Henry M. Hardwick, M.D., Acting Director, Missouri Division of Health, Jefferson City, Mo.; Irving D. Laudeutscher, M.D., LL.B., Medical Director, Regional Office, Office of Civil and Defense Mobilization (Retired), U. S. Public Health Service, Denver, Colo.; Carl Siegel, M.D., Chairman, Committee on Civil Defense Disaster Medical Care, Missouri State Medical Association, Chairman, Committee on National Defense, Missouri Academy of General Practice, Consultant in Health Mobilization, Missouri Division of Health, Sedalia, Mo.; and Anthony F. C. Wallace, Ph.D., Professor and Chairman, Department of Anthropology, University of Pennsylvania, Philadelphia, Pa.

### Doctor's Day Award Presented

Miss Helen Carolyn Crighton, Springfield, Mo., a third-year student in the School of Medicine was presented a $50 award "for a worthy medical student" by the Women's Auxiliary to the Boone County Medical Society, in honor of Doctor's Day, March 30.

### Faculty Appointment Announced

David G. Hall III, M.D., associate professor of obstetrics and gynecology at the School of Medicine has been appointed chairman of the department it was announced by President Elmer Ellis. Dr. Hall has been interim chairman of the department since the death in July, 1960, of Jacob S. Roden, M.D., professor of obstetrics and gynecology, who was the chairman at the time of his death.

### Trips and Talks by Medical Center Staff Members

Dr. M. D. Overholser, professor of anatomy, visited the Mayo Clinic, Rochester, Minn., in connection with a trip sponsored by the American Association of Anatomists. While there, March 23, he consulted with members of the staff concerning problems in anatomical teaching and research.

Drs. Jerry Brown, associate professor, Paul E. Benoit, assistant professor, F. E. Doenges, associate professor, J. A. Green, associate professor, M. D. Overholser, professor, and E. W. Lowrance, professor, all of anatomy, attended the annual meeting of the American Association of Anatomists, March 20-23, in Minneapolis, Minn., where they heard papers on current anatomical research, and viewed motion pictures and demonstrations on anatomical subjects. In addition, the following members of the department presented papers from the platform: Benoit, "Innervation of the Ovary in the Baboon"; Doenges, "Ascending Sympathetic Fibers in the Cervical Vagus Nerve," and Green, "Some Effects of Gonadotrophin on the Fine Structure of Mouse Ovarian Interstitial Cells."

For one of the Special Topics in Biochemistry lecture series, April 6, Dr. Sidney P. Colowick gave a lecture on "Biochemistry of Tumors." Dr. Colowick is professor of microbiology at the Vanderbilt University, Nashville, Tenn.

Frank B. Engley Jr., Ph.D., professor and chairman of the department of microbiology, attended the session on Infectious Disease of the Missouri State Medical Association meeting in St. Louis March 20. On March 24 he attended the Eastern Missouri Branch of the American Society for Microbiology meeting in Columbia as National Counselor of the branch, and from April 3-6, he attended an MEND Symposium at the Communicable Disease Center in Atlanta, Ga., on Control of Infections Disease in Emergencies.

Herbert S. Goldberg, professor of microbiology, also attended the American Society for Microbiology as vice-president March 24. From April 1-10 he visited the University of Nottingham, Eng., for the International Antibiotics Conference, at which he delivered a paper. While in England, Dr. Goldberg visited the bacteriology laboratories of Cambridge University, Unilever Research Department, Cyanamid, Great Britain, and visited with Professor R. Lovell, President of the Society of General Microbiology, and Professor Sir H. W. Florey Nobel Laureate.

Dr. James T. Barrett, associate professor, presided over as president and co-authored a paper at the Eastern Missouri Branch of the American Society for Microbiology held at the Medical Center, March 24. Dr. Michael H. Ivey, assistant professor of microbiology also attended the meeting.

Dr. D. P. Durand, assistant professor of microbiology, gave an interdepartmental seminar on "Interference," March 27, one on "Virus-Cell Complex" on April 2, and one for the department of anatomy on "Virus-Cell Complex" on April 3.

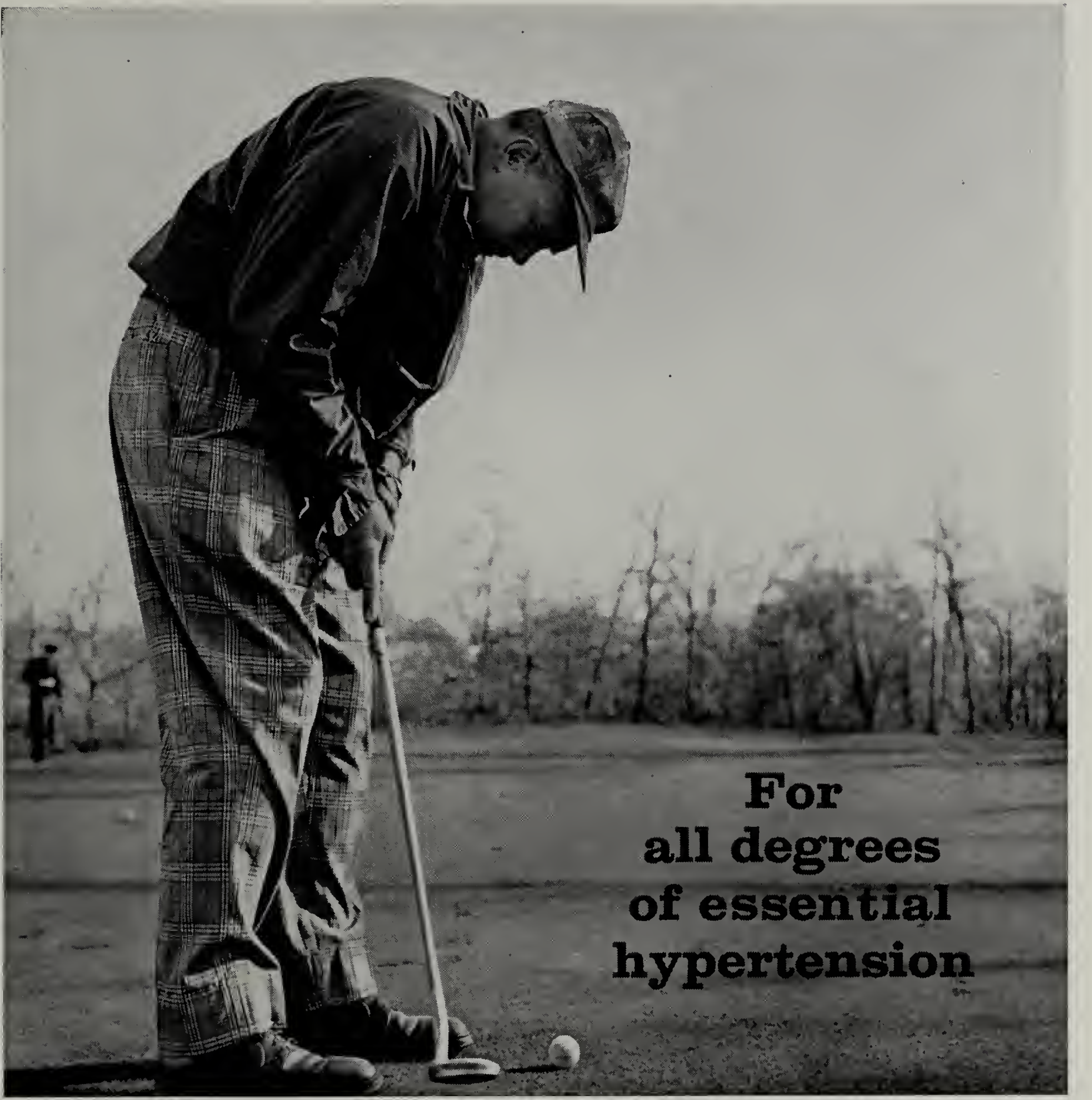
Dr. David G. Hall, associate professor and chairman of the department of obstetrics and gynecology attended the meeting of the American Society for the Study of Sterility and the American College of Obstetricians and Gynecologists Annual meeting, March 29-April 3 in Chicago. Dr. Russell E. Hanlon, and Dr. Herbert J. Schmidt, instructor and resident in OB-GYN also attended the meeting April 2-6. Dr. Hanlon also attended the meeting of the Medical Education for National Defense in San Antonio, Texas, April 8-16. Mass Casualties was the topic of the general program.

Dr. Robert L. Jackson, professor and chairman of the department of pediatrics, attended committee meetings and a board meeting of the Food and Nutrition Research Council in Atlantic City, N. J., April 5-7.

Dr. Clement E. Brooke, associate professor of pediatrics, attended a symposium on Infectious Disease Control and Disasters at a MEND meeting in Atlanta, Ga., April 4-6.

Dr. Ernest E. McCoy, assistant professor of pediatrics, attended a seminar on Neurochemistry March 10 in Vancouver, British Columbia at the Vancouver General Hospital, University of British Columbia, and participated in a seminar on Neurochemistry and Neurological Research March 11. Dr. McCoy, as guest lecturer, also spoke during the morning on March 9 to the pediatrics staff and in an afternoon seminar to the neurological research staff and biochemistry staff.

Dr. James Randall, associate professor of physiology and biophysics, was a participant in a panel discussion concerning "Teaching Biomathematics and Biophysics in the Medical Curricu-



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lum" during the Biometry Society meetings held April 12-14 in Chapel Hill, N. C.

Mr. Robert Stiles has received a Public Health Service Predoctoral Fellowship for graduate study in the department of physiology and pharmacology. He is currently teaching in the Richmond, Missouri public school system.

James M. A. Weiss, M.D., professor and chairman of the department of psychiatry, Henry V. Guhleman Jr., M.D., clinical associate professor, Robert H. Barnes, M.D., clinical associate professor, Charles B. Wilkinson, M.D., clinical associate professor, Robijn Hornstra, M.D., clinical instructor, Robert E. Froelich, M.D., assistant professor and Charlotte M. Brewster, M.D., clinical instructor attended a meeting sponsored by the Region VI Office of the U. S. Public Health Service in Kansas City March 26-30 on "Community Psychiatry and Public Health-Mental Health." Drs. Weiss, Guhleman, Barnes, Wilkinson, and Hornstra served as members of the faculty for this program—the first of its kind in the United States. Dr. Weiss spoke on "Epidemiologic Methods and Studies in Mental Health and Disorder," and served as moderator and discussant throughout the program. Dr. Guhleman spoke on "The Practice of Public Health-Mental Health: The Missouri Program." Drs. Barnes, Wilkinson, and Hornstra presented a program at the Kansas City Psychiatric Receiving Center, discussing the history of the Center and its relation to the practice of Community Psychiatry. Drs. Froelich and Brewster participated as representatives of the University of Missouri and the Psychiatric Receiving Center, respectively.

James M. A. Weiss, M.D., Louis Belinson, M.D., clinical assistant professor of psychiatry, and William D. Mayer, M.D., assistant dean of the school of medicine participated in the First State College Conference on Mental Health, April 7, at Westminster College, Fulton. Dr. Weiss spoke on "Need for Research and Action Programs in Mental Health," and Dr. Belinson spoke about the Fulton State Hospital and supervised a tour of the institution.

Dr. Weiss and Dr. Jacob O. Sines, associate professor of clinical psychology have been appointed consultants in psychiatry and psychology, respectively, to the Board of Missions of the Methodist Church. Dr. Philip J. Marco, assistant professor of psychiatry attended a meeting at the University of Wisconsin on psychophysiological medicine April 28. Dr. Fernando Tapia, assistant professor of psychiatry—child psychiatry, participated in a discussion of the medication for brain damaged children at the national meeting of the American Orthopsychiatric Association, in Los Angeles, Calif., March 21 to 24.

Dr. Gwilym S. Lodwick, professor and chairman of the department of radiology, attended a meeting of the Missouri State Medical Association in St. Louis, March 20-21. The Missouri Radiological Society met in conjunction with the MSMA meeting and those attending from the department were Drs. Lodwick, Cochran, Wheeler, Rall, Dolan and Condon. Dr. Lodwick is president of the Missouri Radiological Society.

Dr. Theodore E. Keats, professor of radiology was a guest of the department of radiology at the University of Virginia School of Medicine in Charlottesville, Va., March 27-30.

Dr. Donald Q. Cochran, assistant professor of radiology, attended a course on Medical Education for National Defense in San Antonio, Texas April 16-20.

Dr. John Buesseler, professor of surgery (ophthalmology), Dr. Felix N. Sabates, special resident fellow in surgery (ophthalmology), and Drs. Richard Coe, John Irvine, and Wilbur Spalding, resident physicians in surgery (ophthalmology), attended the postgraduate medical course in ophthalmology in Kansas City, April 2-4, presented by the University of Kansas.

Dr. Hugh Stephenson Jr., professor of surgery, spoke to the Division of Health and Physical Education of the University of Missouri in connection with the Missouri Heart Association on the "Latest Development of Heart Surgery" April 14. Dr. Stephenson will be leaving May 1 for the British Isles as the first James IV Traveling Professor of Surgery from the United States. He will observe undergraduate and postgraduate teaching programs in the medical schools of Ireland, Scotland, England and Wales, as well as lecture in these institutions. Before returning home, Dr. Stephenson will attend the VIIIth International Cancer Congress in Moscow.

Dr. Samuel P. W. Black, professor of surgery (neurosurgery), spoke to the Missouri State High School Association Football Coaching School Program in cooperation with the University of Missouri Athletic Department on "Head Injuries in Football," April 6, in Columbia.

Dr. Kenneth K. Keown, professor of anesthesiology, was elected president-elect of the Missouri Society of Anesthesiologists, April 8 in St. Louis.

Dr. Edward Johnson, resident physician in surgery (urology), attended the course in management of mass casualties in Fort Sam Houston, Texas, April 7-13.

Dr. Carl H. Almond, assistant professor of surgery, and Dr. John Van Peenen, assistant professor of pathology, were sent to Palo Alto, Calif., by the Education Committee to compare the teaching program of Stanford University with that of the University of Missouri, April 2-5. Dr. Almond also gave a talk on "Upper G.I. Hemorrhage" to the Ozark Medical Society in Mount Vernon, March 13. Drs. Kiphart, Anito, and Galloway were also there.

Dr. Almond and Dr. Garth S. Russell, research associate in surgery, attended the 46th annual meeting of the Federation of American Societies for Experimental Biology in connection with tissue transplantation in Atlantic City, N. J., April 12-15.

Miss Ruby Potter, associate dean in charge of the School of Nursing, attended the Missouri State Student Nurses' Association meeting in Jefferson City, March 30.

Mrs. Evelyn Eng, R.N., director of nursing service, attended the Hickman High School Career Day, March 2. On February 14-17, Miss Vera Turner assistant director of nursing service, attended a hospital safety meeting at the University of Michigan, Ann Arbor.

Miss Aimee Moore, director, dietetics and nutrition, Evelyn Carter, and Betty Gainey attended a Four State Nutrition Conference in Lincoln, Nebraska, at the Nebraska Center for Continuing Education, April 11-13. Miss Moore led a discussion group on food service administration. She also attended an invitational conference on educating the dietitian at the University of Wisconsin, April 5-7.

Dr. Moore has been appointed for a five-year term to the Veterans Administration Dietetic Advisory Council, to review activities of VA Dietetic Service and to make recommendations.

## ST. LOUIS UNIVERSITY

### Meetings

The Faculty Members of St. Louis University presented seventeen papers at the 46th Annual Meeting of the Federation of American Societies for Experimental Biology at Atlantic City, New Jersey, April 14 through April 18.

The Department of Biochemistry, under the direction of Dr. Edward A. Doisy, gave five of the scientific papers. Participants were: Dr. Philip Katzman, Director of Biochemistry Department; Dr. Edward A. Doisy, Jr., Professor; Dr. Harold Van Kley, Assistant Professor; Dr.

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The Department of Pharmacology, directed by Dr. Elijah Adams, presented two papers. Participants and their subjects were: Dr. Audrey Stevens, Instructor and Dr. C. Ning, graduate student—"Stimulation of amino acid incorporation into protein by phage DNA and on RNA polymerese fraction" introduced by Dr. Elijah Adams; Dr. H. L. Segal, Assistant Professor and Dr. S. Hopper, graduate student—"Properties and mechanism of rat liver glutamic-alanine transaminase."

The Department of Physiology, under the direction of Alrick B. Hertzman, presented four papers. Participants and the sessions in which their papers were presented were: Dr. Leo C. Senay, Jr., Assistant Professor; Dr. Kermit Christensen, Professor of Anatomy, Acting Director of the Department; Dr. Alrich B. Hertzman, Director—*Hyperthermia.* Dr. Pietro O. Bramante, Associate Professor; Dr. Arthur S. Nunn, Instructor; Dr. M. C. Steiner, graduate student—*Neoplasia I.* Dr. J. B. McNally, graduate student; Dr. Arthur S. Nunn, Instructor; Dr. J. V. Cichon, graduate student; Dr. Alfred W. Richardson, Professor—*Gastroenterology II.* Dr. Pietro O. Bramante, Associate Professor; Dr. Arthur S. Nunn, Instructor; Dr. Mogammed Sayeed, graduate student—*Gastroenterology II.*

The Department of Surgery directed by Dr. C. Rollins Hanlon, gave two papers. Participants and their sessions were: Dr. X. J. Musacchia, graduate student; Dr. Max Jellinek, Instructor; Dr. Theodore Cooper, Associate Professor—*Reproduction.* Dr. Vallee L. Willman, Professor; Dr. John Schweis, Assistant Professor; Dr. Theodore Cooper, Associate Professor; Dr. Max Jellinek, Instructor—*Blood Flow.*

The Department of Microbiology, directed by Dr. R. Walter Schlesinger, presented four papers in the selected sessions. Dr. Morton Weber, professor, in association with two doctors from Washington University presented his paper in the *Biological Oxidation* session. Other participants and their sessions were: Dr. John T. Matschiner, Assistant Professor—*Amino Acid Metabolism;* Dr. R. Walter Schlesinger, Director and Dr. Irene T. Schultz, graduate student—*Cells and Tissue;* Dr. Maurice Green, Associate Professor—*Nucleic Acids.*

Dr. C. Rollins Hanlon, Director, Department of Surgery, has been elected treasurer of the American Association of Thoracic Surgery. Drs. Hanlon, Director; Theodore Cooper, Assistant Professor, Department of Surgery; Vallee Willman, Assistant Professor, Department of Surgery, presented a paper on "Hyperthermia" before a recent meeting of the Association held in St. Louis. Drs. Herbert Sweet, Associate Professor, Clinical Medicine; Paul Murphy, Professor of Clinical Medicine; and Joseph L. Lucido, Assistant Professor of Clinical Medicine were coauthors of a paper on chronic lung diseases presented before the same meeting.

Dr. Armand E. Brodeur, associate dean, participated in a program sponsored by the Montana Radiological Society in Anaconda, Montana on April 27. His lecture was entitled "Magic." The meeting was held in conjunction with the Montana Thoracic Society.

Dr. Pietro O. Bramante, associate professor of physiology and Dr. James V. Redington, instructor in surgery attended the 1962 Medical Education for National Defense tour. Their trip included visits to the Aerospace Medical Division at Brooks Air Force Base in San Antonio and U. S. Naval Air Station and Marine Corps Recruit Depot in San Diego.

### Retina Service

Dr. Anwar Shah has been placed in charge of the Retina Service in the Department of Ophthalmology at Firmin Desloge Hospital of St. Louis University, and named assistant director of the University's Resident Training Program in Ophthalmology.

The establishment of the Retina Service is an expansion of the Department of Ophthalmology designed to facilitate the care of patients suffering from detached retinas and the study of retinal disease. The department has added offices and diagnostic laboratories on the first floor of the hospital.

Born in Burma, Dr. Shah was awarded his bachelor of science degree by the University of Punjab in Pakistan. After studying medicine at King Edward Medical College in Pakistan, he interned for a year at Mayo Hospital in Pakistan. He taught at King Edward Medical College as an instructor in ophthalmology for several years before he came to St. Louis.

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Dr. Shah first became associated with St. Louis University in 1955 when he came from Pakistan as a Fulbright Scholar. During his first year in this country he served as assistant resident in Internal Medicine at St. Louis University. He was a fellow in Ophthalmology for one year at Washington University and then returned to St. Louis University for three additional years of residency training in Ophthalmology under Dr. Robert Dean Mattis.

Dr. Shah recently completed a year's fellowship at Harvard University, where he was associated with Dr. Charles Schepens, Director of the Retina Service at the Massachusetts Eye and Ear Infirmary and the nearby Retina Foundation.

### Grant

Dr. Philip Katzman, professor of biochemistry at the St. Louis University School of Medicine has been awarded a $60,000 grant for a three year period by the United States Public Health Service to support his study of the biological action of estrogenic female sex hormones.

In 1929 Dr. Edward A. Doisy, director of the department of biochemistry, isolated the first such hormone, estrone, and shortly thereafter two additional chemically related hormones were discovered. Within the last ten years a number of new estrogens have been isolated from natural sources by various investigators and some of their derivatives have been prepared; however, virtually nothing is known about their biological activities.

Estrogens have been studied continuously in the Department of Biochemistry at St. Louis University's School of Medicine for almost forty years. In this field, Dr. Katzman has investigated methods for determining the excretion of estrogen in order to improve the clinical evaluation of ovarian function. More recently he has been interested in studying the biological importance of these compounds by employing different criteria of following their administration in different species of animals.

One of the new hormones has been found to be at least as active as the most active estrogen previously known and a derivative of another new estrogen has been shown to stimulate the ovaries of immature rats. The aim of his work is to provide a basis for selecting compounds for specific clinical and experimental uses.

### Alumni Reunion

The St. Louis University Medical Alumni reunion held in conjunction with the American Medical Association meeting each year will be in the form of a stag luncheon on Wednesday, June 27, at Sportsmen's Room, Illinois Athletic Club in Chicago. Cocktails will be available from a cash bar from 12:30 to 1:00 p.m. and luncheon will be served at 1:00 p.m. Luncheon speakers will be the Very Rev. Paul C. Reinert, S.J., President; Dr. Goronwy O. Broun, Dean and Dr. Armand E. Brodeur, Associate Dean.

## ELLIS FISCHEL STATE CANCER HOSPITAL

This is the first of a series of monthly articles planned to keep Missouri physicians informed about the activities and operation of the Ellis Fischel State Cancer Hospital, in hope that the information will be of assistance in facilitating the care of indigent cancer patients within the State.

### Admitting Procedure

The admitting procedures at the hospital have not been published in Missouri Medicine since 1955.[1]

To review the procedures for physicians that have entered practice since 1955, the services of this hospital are available to any medically indigent patient with the diagnosis or suspected diagnosis of cancer. The law requires that the standard "Request for Admission of Patient to the Ellis Fischel State Cancer Hospital" be completed on page 2 by the referring physician and on page 3 by the presiding judge of the county of residence declaring the patient medically indigent. These forms are available at the county clerk's office, the county public health offices and can be obtained on request directly from the hospital. Upon receipt of the completed form at the hospital, the patient's name is placed on the waiting list and the patient is informed when to appear at the hospital for diagnosis and treatment. The wait for routine problems varies from one to three weeks.

A physician who is faced with a medical or surgical emergency is encouraged to call the Chief Surgeon of the Hospital (Telephone, Columbia, GIbson 3-3103, extension 46) to discuss the availability of beds and to coordinate management until a bed is available for the patient. Even in emergencies the completed papers authorizing admission must accompany the patient to the hospital.

Routine hospital admissions are made through the Out-Patient Clinic on Mondays, Wednesdays

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[1] Meinershagen, C. W., Admission Procedure and Policies, Ellis Fischel State Cancer Hospital, Columbia, Missouri Medicine, March 1955, (210-211).

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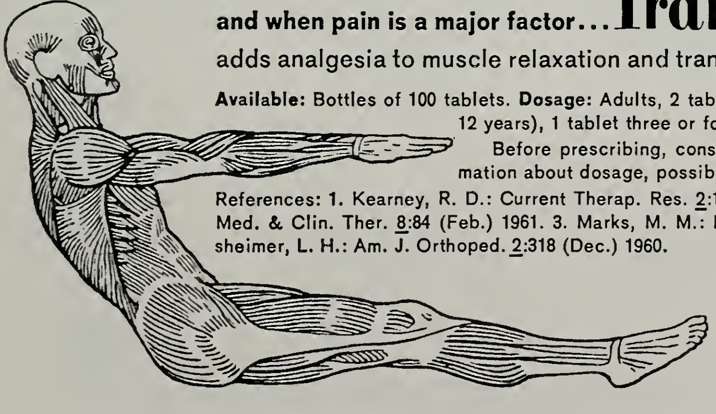

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References: 1. Kearney, R. D.: Current Therap. Res. 2:127 (April) 1960. 2. Cornbleet, T.: Antibiotic Med. & Clin. Ther. 8:84 (Feb.) 1961. 3. Marks, M. M.: Missouri Med. 58:1037 (Oct.) 1961. 4. Hergesheimer, L. H.: Am. J. Orthoped. 2:318 (Dec.) 1960.

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and Fridays. Many patients can return to their homes after examination and treatment in the Out-Patient Clinic, and return to the Clinic for subsequent follow-up studies. Follow-up examinations are completed on nearly 100 per cent of all patients and are important to the patient and to the Hospital Staff to determine if the disease is controlled and for study of the survival rates of various types of cancer treated by various modes of therapy. Much of the clinical research from the hospital centers around the comprehensive follow-up system, permitting continued study of the end results of therapy.

### Cancer Detection Clinic

Physicians from all parts of the State have been attending Cancer Detection Clinics in Columbia on the second Wednesday and Thursday of each month since last September. The Cancer Hospital Staff conducts the Wednesday afternoon and Thursday morning sessions. The afternoon session is started at the new patient conference where resident physicians present new patients to the combined Cancer Hospital staff consisting of the chief surgeon, the radiotherapist, internist and pathologist for initial diagnostic and therapeutic decisions. Subsequently, the attending physicians are shown the follow-up procedures and therapeutic methods for the detection and control of cancers of the skin by Dr. Long. Dr. Sala demonstrates the methods of examining mouth and upper respiratory tract for the detection of cancers in these areas. The morning session begins at 8:00 a.m. in the operating room where Dr. Spratt demonstrates the method of examining and biopsying the breast for diagnosis of cancer. A biopsy taken at the time is examined by frozen section examination by Dr. Johnson who discusses the pathology and prognosis of mammary cancer. Subsequently, the guests are shown the technique of radical mastectomy employed at the Cancer Hospital. Later in the morning the guests are taken for rounds on the radiotherapy ward for a general discussion of the detection and treatment of various types of cancer managed by radiotherapy. These rounds are followed by lunch at the Cancer Hospital. The number of physicians attending each clinic has been limited to six to permit full participation and discussion and individual instruction.

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A Consulting Staff Conference was held at the Ellis Fischel State Cancer Hospital March 24, 1962.

Dr. George L. Watkins, Jr., Chairman of the Consulting Staff, welcomed the members and their guests to the meeting. Dr. A. McChesney Evans, Chief of Internal Medicine, discussed the "Chemotherapy of Cancer." Dr. William Donegan presented "Pathogenesis and Prognosis of Recurrent Cancer of the Chest Wall Following Radical Mastectomy." A discussion of "Repair of Perineal Hernia Following Pelvic Exenteration" was presented by Dr. Ernesto Ego-Aguirre. This was followed by Dr. John H. Beggs' presentation of "Behavior and Management of Epidermoid Carcinoma of the Penis."

Former residents of the hospital staff who presented papers were Dr. Burl Dillard on "Behavior and Management of Epidermoid Carcinoma of the Anus," and Dr. Jim Gleason on "Adenocarcinoma of the Endocervix—Diagnosis, Treatment, and Survival."

Other papers presented were "Carcinoma of the Vagina" by Dr. Byron J. Masterson; "Carcinoma of the Cervical Stump" by Dr. Alberto D. de Leon; and "Review of Benign Salivary Gland Tumors" by Dr. Andrew W. Walker.

Discussants for the various papers included Doctors Richard Johnson, William See, John Modlin, E. J. Schewe, Jr., John S. Spratt, Jr., and J. M. Sala of Columbia; Dr. H. L. Warres of St. Joseph; Dr. Harvey Butcher of St. Louis; and Dr. Ned Rodes of Mexico.

The professional session was well attended by members of the Consulting Staff and their guests —the referring physicians interested in Cancer Hospital activities.

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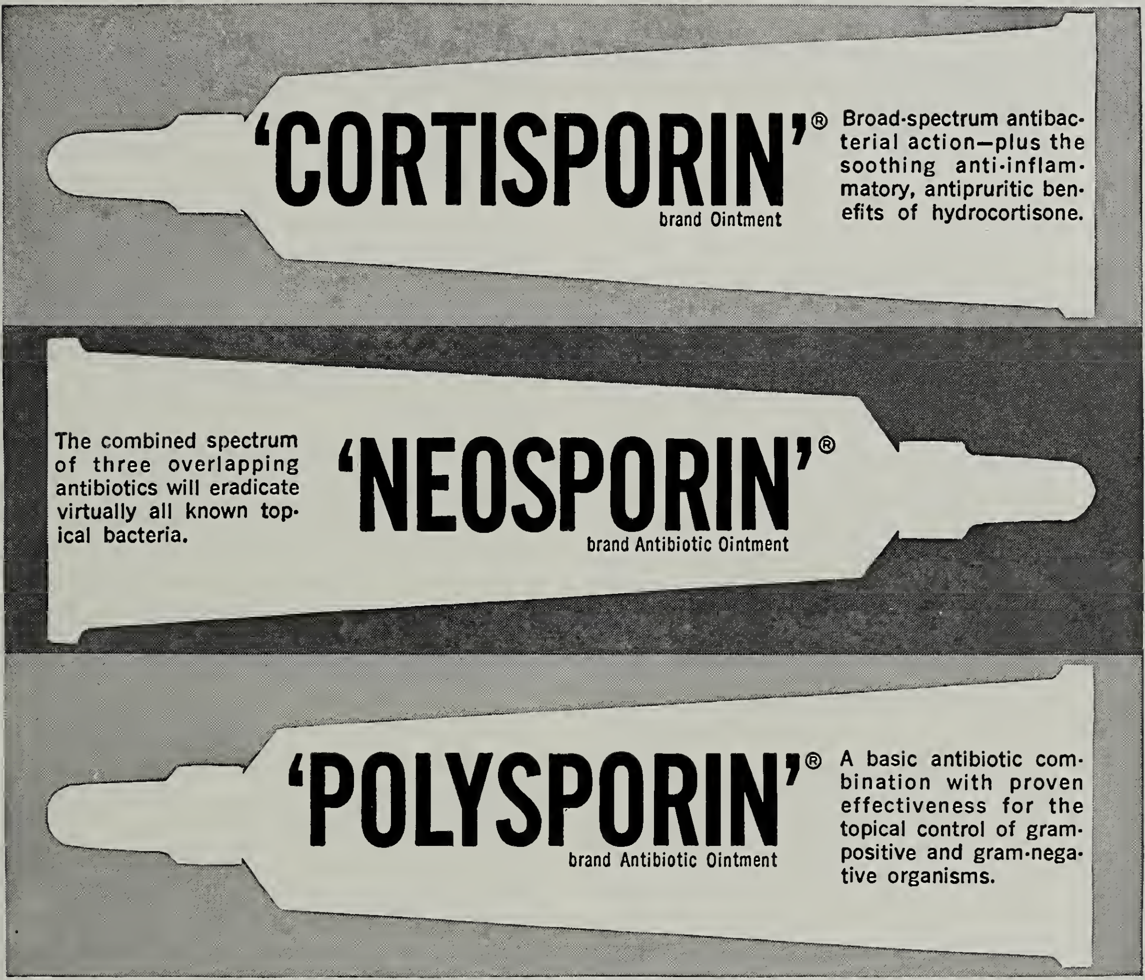

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# Missouri Medicine in Review

## FORTY YEARS AGO

Memorial services for the late Dr. Young H. Bond, who founded the Marion Sims College of Medicine in 1890, now the medical department of the St. Louis University, were held at the University on Thursday, May 25. Among the speakers were Rev. W. B. Rogers, former president of the University, Dr. Carl Barck, Dr. B. M. Hypes, Dr. Jacob Geiger and Dr. H. W. Loeb.

For the first time in history of the country a definite and comprehensive plan has been adopted for the peacetime development of an Army of the United States. General Pershing believes that the World War might have been averted if the present preparedness plan had been adopted some years earlier. In operation now it will make future war a remote possibility. For the purposes of organization and training the country has been divided into nine corps areas and active organization is now under way throughout the entire United States. The states of Missouri and Arkansas have been allotted to the 102 Division, U. S. Army, with headquarters at 408 Old Custom House, 3d and Olive Streets, St. Louis.

Dr. Robert D. Haire, of Clinton, departed for Europe on June 8, accompanied by his wife and daughter.

Dr. George Dock, professor of medicine of Washington University Medical School, has resigned.

Drs. J. E. Baird, E. L. Parker and J. E. Musgrave of Excelsior Springs, have been appointed members of the board of health of that city.

Dr. R. L. Sutton, of Kansas City was the recipient of the honorary degree of doctor of laws at the eightieth annual commencement of the University of Missouri.

The St. Louis Medical Society has taken action looking toward the erection of a new building and a committee has been appointed to investigate sites and submit recommendations to the Society.

A special course in general surgery is offered to a limited number of physicians by Dr. Max Thorek at the American Hospital, Chicago, Illinois, through an announcement in the advertising pages of this issue of *The Journal.*

Press dispatches state that the State Food and Drug Commissioner was arrested for violating the state prohibition law. He and his brother were charged with operating a still.

Construction on the new building for the St. Louis University School of Dentistry has been started and it is expected that the building will be completed and ready for the classes at the fall semester.

Dr. Warfield Theobald Longcope, Bard professor of medicine at Columbia University, and physician-in-chief at the Presbyterian Hospital, New York City, has been appointed professor of medicine at the Johns Hopkins University Medical Department, and physician-in-chief at the Johns Hopkins Hospital, beginning on July 1, when the one-year term of Dr. G. Canby Robinson will expire.

## TWENTY-FIVE YEARS AGO

The 80th Annual Session of the Missouri State Medical Association convened in Cape Girardeau, May 10, 11 and 12 with 461 in attendance including premedical students, nurses from local hospitals and visiting physicians from Illinois. Dr. Bernard W. Hays, Jackson, was selected as President-Elect. He will serve as President-Elect during this year and will be installed as President at the Jefferson City Session in 1938 and will serve as President during that year. Dr. Ross A. Woolsey, St. Louis, presided and Dr. Dudley S. Conley, Columbia, was installed at the Wednesday session of the House of Delegates and will preside at the 1938 Annual Meeting which will be held in Jefferson City. Other officers elected were: Vice Presidents, Drs. W. A. Bloom, Fayette, E. L. Johnston, Concordia, and S. E. Mitchell, Malden; Secretary-Editor, Dr. E. J. Goodwin, St. Louis; Assistant Secretary and Business Manager, E. H. Bartelsmeyer, St. Louis; Treasurer, Dr. John R. Caulk, St. Louis.

The American Medical Association will meet this year in Atlantic City where two years ago it had the largest attendance any medical meeting has ever had. The 88th Annual Session will convene from June 7 to 11 with practically all sessions and exhibits in Convention Hall. The House of Delegates will meet in the Ambassador Hotel.

The Committee Substitute for Senate Bill No. 3, providing for the establishment of a State Cancer Hospital in or near Columbia for the treatment of cancer and allied diseases, has passed the Senate and the House and is now before the Governor for his signature. Senate Bill No. 192, amending the Missouri laws with reference to narcotic drugs so as to be in harmony with the Federal Narcotic Act, called the Uniform Narcotic Drug Act, is now on the calendar for perfection. Senate Bill No. 135, amending the present medical practice act by requiring applicants for medical licensure to be citizens of the United States and be able to read and write the English language, also that applicants shall have completed a two year college or university course in the subjects of physics, chemistry and zoology, is still in the Committee on Public Health of the Senate.

## TEN YEARS AGO

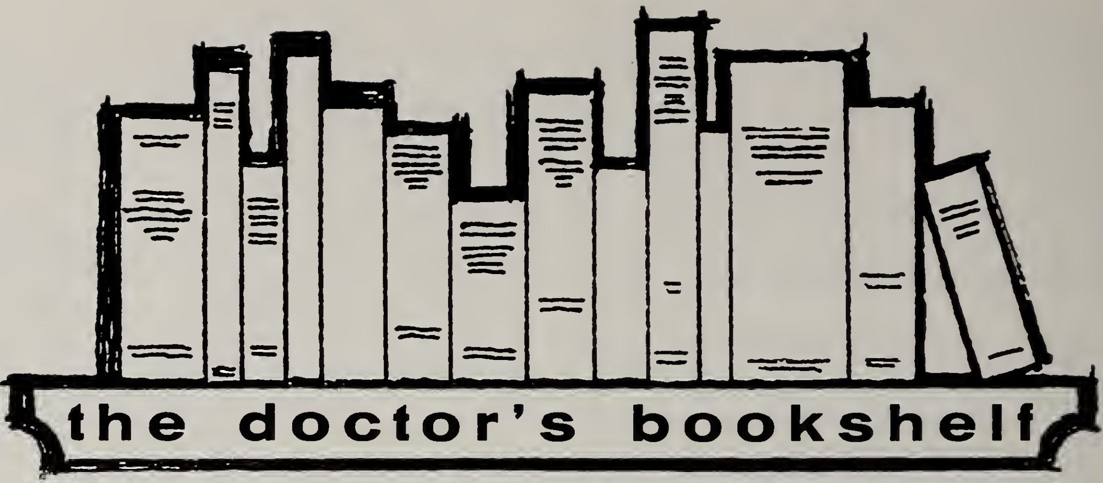
E. Claude Bohrer, M.D., West Plains, was elected President-Elect of the Missouri State Medical Association at the 94th Annual Session held in St. Louis, March 30 through April 2, 1952. He will serve as President-Elect until the next Annual Session when he will be installed as President. Dr. Bohrer is a member of the American Academy of General Practice, the American Trudeau Society and American College of Chest Physicians. He is a member of Phi Beta Kappa, Sigma Xi and Alpha Omega Alpha. His hobbies are color photography and music.

President J. William Thompson, M.D., says: In the 1948 presidential election only half the American people of voting age voted—48,000,000 out of a possible 95,000,000. The percentage of people who vote regularly in all elections, local, state and national, is normally only from 20 to to 25 per cent. It has been said that the medical profession, as a whole, is one of those groups which percentagewise is in the lowest category among those voting. Why is this the case?

At the April meeting of the Ozarks Medical Society, the lawyers of the five counties comprising the society were invited guests. A fellowship hour initiated the evening festivities. A bountiful dinner gave further aid to the production of a most pleasant atmosphere. W. S. Sewell, M.D., Springfield, Councilor of the Eighth Councilor District, was called upon by the society to discuss mutual problems of the professions.

The fourth annual meeting of the Missouri Academy of General Practice was held at the Governor Hotel, Jefferson City, on May 8. Some 125 general practitioners from all sections of the state attended. The morning program dealt with the business end of the Academy's activities. The scientific program began with a luncheon session featuring Carl Moyer, M.D., St. Louis. On the afternoon program the following doctors appeared: Drs. William B. See, Columbia; Garold V. Stryker, St. Louis; Stanley F. Hampton, St. Louis, and William P. Williamson, Kansas City, Kansas. Mr. H. Roe Bartle, Kansas City, gave the address at the annual banquet stressing the importance of the role of the physician in community affairs.

DEATHS—Coombs, Miller O., M.D., Joplin, a graduate of the Hahnemann Medical College and Hospital, Chicago, 1912; member of the Jasper County Medical Society, aged 72; died March 5. Craven, Y. D., M.D., Long Beach, California, a graduate of Kentucky School of Medicine, Louisville, 1896; honor member and past president of the Clay County Medical Society; aged 83; died March 18.



# the doctor's bookshelf

## BOOKS RECEIVED

Atlas of Clinical Endocrinology, by H. Lisser, M.D., Clinical Professor Emeritus of Medicine and Endocrinology, University of California School of Medicine, San Francisco, Calif.; and Roberto F. Escamilla, M.D., Clinical Professor of Medicine, University of California School of Medicine, San Francisco, Calif.; Civilian Consultant and Chief of Endocrine Clinic, Letterman Army Hospital, San Francisco, Calif. Second edition, The C. V. Mosby Company, St. Louis, 1962. Price: $23.00.

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Hypertension Recent Advances, the Second Hahnemann Symposium on Hypertensive Disease, edited by Albert N. Brest, M.D., Assistant Professor of Medicine and Head, Section of Hypertension and Renology, Hahnemann Medical College and Hospital, Philadelphia, Pa.; and John H. Moyer, M.D., Professor and Chairman of the Department of Medicine, Hahnemann Medical College and Hospital, Philadelphia. Lea & Febiger, Philadelphia, 1961.

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The Dynasty, A Medical Novel, by Charles H. Knickerbocker. Doubleday & Company, Inc., Garden City, New York, 1962. Price: $4.50.

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Problems in Surgery, From Surgical Grand Rounds at The New York Hospital-Cornell Medical Center, by Frank Glenn, M.D., Lewis Atterbury Stimson Professor of Surgery, Cornell University Medical College, New York; Surgeon-in-Chief, The New York Hospital-Cornell Medical Center, New York, and edited by George E. Wantz Jr., M.D., Assistant Professor of Clinical Surgery, Cornell University Medical College, New York; Assistant Attending Surgeon, The New York Hospital-Cornell Medical Center, New York. The C. V. Mosby Company, St. Louis, 1961. Price: $16.50.

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Diagnosis and Therapy of the Glaucomas, by Bernard Becker, M.D., Professor and Head of the Department of Ophthalmology, Washington University School of Medicine, St. Louis; and Robert N. Shaffer, M.D., Associate Professor of Ophthalmology, University of California School of Medicine, San Francisco, Calif. The C. V. Mosby Company, St. Louis, 1961. Price: $18.00.

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Postpartum Psychiatric Problems, by James Alexander Hamilton, Ph.D., M.D., Associate Clinical Professor of Psychiatry, Stanford University School of Medicine, Stanford, Calif.; Chief of Service, Psychiatry, Saint Francis Memorial Hospital, San Francisco, Calif. The C. V. Mosby Company, St. Louis, 1962. Price: $6.85.

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Common Sense About Psychoanalysis, by Rudolph Wittenberg. Doubleday & Company, Inc., New York, 1962. Price: $3.95.

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A Prelude to Medical History, by Felix Marti-Ibanez, M.D., Professor and Chairman of the Department of the History of Medicine, New York Medical College, Flower and Fifth Avenue Hospitals, New York; Editor-in-Chief of

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HE EATS TOO
HIGH ON THE
HOG...

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A. H. Robins Company, Inc., Richmond 20, Virginia

*MD*. MD Publications, Inc., New York, 1961. Price: $5.75.

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Strong Medicine, by Blake F. Donaldson, M.D. Doubleday & Company, Inc., Garden City, New York, 1962. Price: $3.95.

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Irritation and Counterirritation, A Hypothesis About the Autoamputative Property of the Nervous System, A Scientific Excursion Into Theoretical Medicine, by Adolphe D. Jonas, M.D. Vantage Press, New York, 1962. Price: $7.50.

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Current Therapy 1962, edited by Howard F. Conn, M.D. W. B. Saunders Company, Philadelphia, 1962. Price: $12.50.

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A Textbook of Obstetrics, by Duncan E. Reid, M.D., William Lambert Richardson Professor of Obstetrics, and Head of the Department of Obstetrics and Gynecology, Harvard University Medical School; Chief of Staff, Boston Lying-in Hospital; illustrated by Edith Tagrin. W. B. Saunders Company, Philadelphia, 1962. Price: $18.50.

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Drugs of Choice 1962-1963, by Walter Modell, M.D., Director, Clinical Pharmacology, and Associate Professor Pharmacology, Cornell University Medical College, New York; Attending Physician, Veterans Administration Hospital, Montrose, N. Y.; Associate Visiting Physician, Bellevue Hospital, New York; Member, Revision Committee, United States Pharmacopeia XVII; Editor, *Clinical Pharmacology and Therapeutics*. The C. V. Mosby Company, St. Louis, 1962. Price: $14.50.

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Carcinoma of the Cervix, by John B. Graham, M.D., Chief Gynecologist, Roswell Park Memorial Institute; Associate Professor of Gynecology, University of Buffalo Medical School; and Luciano S. J. Sotto, M.D., Consultant in Gynecology, Philippine General Hospital; Instructor in Gynecology, University of the Philippines College of Medicine; and Frank P. Paloucek, M.D., Attending Gynecologist, Roswell Park Memorial Institute; Instructor in Gynecology, University of Buffalo Medical School. W. B. Saunders Company, 1962, Philadelphia. Price: $14.00.

Textbook of Endocrinology, edited by Robert H. Williams, M.D., Chief, Endocrinology and Metabolism Division, and Physician-in-Chief, University Hospital; Executive Officer and Professor of Medicine, University of Washington Medical School, Seattle, Washington, with Contributions by Twenty-One Authorities, third edition—illustrated. W. B. Saunders Company, Philadelphia, 1962. Price: $21.00.

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An Atlas of Head and Neck Surgery, by John M. Lore Jr., M.D., Attending Surgeon, Good Samaritan Hospital, Suffern, New York; Associate Attending Surgeon, Head and Neck Service, Department of Surgery, Saint Clare's Hospital, New York; Consultant Surgeon, Tuxedo Memorial Hospital, Tuxedo, New York, illustrated by Robert Wabnitz, Director of Medical Illustration, University of Rochester Medical Center, Rochester, New York. W. B. Saunders Company, Philadelphia, 1962. Price: $25.00.

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Modern Concepts of Hospital Administration, edited by Joseph Karlton Owen, M.S., Ph.D., Specialist in Hospital Administration, Louis Block & Associates, Inc., Silver Spring, Md.; Lt. Col., M.S.C. (Reserve), U. S. Army, formerly Administrator, District of Columbia General Hospital; Assistant Director of Mental Hospitals, Commonwealth of Virginia; Professor of Hospital Administration and Director, School of Hospital Administration, Medical College of Virginia; with the Coordinative assistance of Robert K. Eisleben, M.A., Assistant Administrator of Little Company of Mary Hospital; Formerly Administrative Assistant, District of Columbia General Hospital. W. B. Saunders Company, Philadelphia, 1961.

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The Abortionist, by Dr. X as told to Lucy Freeman. Doubleday & Company, Inc., New York, 1962. Price: $3.95.

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Ciba Foundation, Renal Biopsy Clinical and Pathological Significance, G. E. W. Wolstenholme, O.B.E., M.A., M.B.M.R.C.P.; and Margaret P. Cameron, M.A. Little, Brown and Company, Boston, 1962. Price: $10.50.

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Tomorrow's Miracle, by Frank G. Slaughter. Doubleday & Company, Inc., Garden City, New York, 1962. Price: $3.95.

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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# Minutes of the House of Delegates

## One Hundred Fourth Annual Session
## March 18, 19, 20, 21, 1962
## St. Louis

### Sunday Session

The first meeting of the House of Delegates of the 104th Annual Session of the Missouri State Medical Association was called to order at 1:30 p.m., Chase Club, Hotel Chase, St. Louis, with William C. Mixson, M.D., Kansas City, Speaker, presiding.

Officers, Councilors and Delegates present during the Annual Session follow:

### Officers

| | |
|---|---|
| President | J. H. Summers, Lebanon |
| President-Elect | Donald M. Dowell, Chillicothe |
| Vice President | Claude W. Cooper, Thayer |
| Vice President | Benjamin N. Jolly, Mexico |
| Vice President | David N. Kerr, St. Louis |
| Secretary | John I. Matthews, Jefferson City |
| Treasurer | Charles R. Doyle, St. Louis |
| Speaker of the House | William C. Mixson, Kansas City |
| Vice Speaker of the House | Stanley S. Peterson, Springfield |

### Councilors

| | |
|---|---|
| 1st District | Joseph L. Fisher, St. Joseph |
| 2nd District | A. P. Rowlette, Moberly |
| 3rd District | Leonard T. Furlow, St. Louis |
| 4th District | Paul R. Whitener, St. Louis |
| 5th District | Byron M. Stuart, Boonville |
| 6th District | O. B. Barger, Harrisonville |
| 7th District | Kenneth C. Hollweg, Kansas City |
| 8th District | Doyle C. McCraw, Bolivar |
| 9th District | E. A. Stricker, St. James |
| 10th District | W. D. English, Cardwell |

### DELEGATES

### First District

| | |
|---|---|
| Andrew | Forrest C. Long, Savannah |
| Buchanan | John N. Martin, St. Joseph |
| Buchanan | E. E. Wadlow, St. Joseph |
| Clay | R. D. Dwyer, North Kansas City |
| Clay | Robert H. Hodge, North Kansas City |
| Clinton | J. P. Mabrey, Plattsburg |
| Grand River | |
| Caldwell | Frank R. Daley, Hamilton |
| Livingston | W. L. Fair, Chillicothe |
| Carroll | John H. Platz, Carrollton |
| Grundy | C. L. Clark, Trenton |
| Daviess | |
| Harrison | M. Gearhart, Bethany |
| Linn | Ralph Bohnsack, Brookfield |
| Mercer | |
| DeKalb | J. H. Sweiger, Maysville |
| Nodaway-Holt-Atchison-Gentry-Worth | R. E. Dunshee, Maryville |
| Nodaway-Holt-Atchison-Gentry-Worth | Albert L. Carlin, Stanberry |

### Second District

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|---|---|
| Chariton-Macon-Monroe-Randolph | F. L. Harms, Salisbury |
| Chariton-Macon-Monroe-Randolph | J. E. Campbell, Macon |
| Chariton-Macon-Monroe-Randolph | F. A. Barnett, Paris |
| Chariton-Macon-Monroe-Randolph | Thomas S. Fleming, Moberly |
| Lewis-Clark-Scotland | Landis Y. Davis, Canton |
| Marion-Ralls-Shelby | Robert J. Lanning, Hannibal |
| North Central | |
| Adair | Spencer L. Freeman, Kirksville |
| Pike | C. H. Lewellen, Louisiana |

### Third District

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|---|---|
| St. Louis City | Roy V. Boedeker, St. Louis |
| St. Louis City | Edward M. Cannon, St. Louis |
| St. Louis City | Joseph C. Edwards, St. Louis |

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|---|---|
| St. Louis City | Stanley F. Hampton, St. Louis |
| St. Louis City | George L. Hawkins, Jr., St. Louis |
| St. Louis City | Eugene V. Henschel, St. Louis |
| St. Louis City | David N. Kerr, St. Louis |
| St. Louis City | Edward D. Kinsella, St. Louis |
| St. Louis City | Louis H. Kohler, St. Louis |
| St. Louis City | Warren M. Lonergan, St. Louis |
| St. Louis City | J. Otto Lottes, St. Louis |
| St. Louis City | Joseph Lucido, St. Louis |
| St. Louis City | James M. Macnish, St. Louis |
| St. Louis City | W. L. Macon, Jr., St. Louis |
| St. Louis City | Paul F. Max, St. Louis |
| St. Louis City | Vernon E. Michael, St. Louis |
| St. Louis City | Arthur W. Neilson, St. Louis |
| St. Louis City | Charles H. Nicolai, St. Louis |
| St. Louis City | Joseph C. Peden, Sr., St. Louis |
| St. Louis City | Charles S. Sherwin, St. Louis |
| St. Louis City | Jerome I. Simon, St. Louis |
| St. Louis City | J. William Thompson, St. Louis |
| St. Louis City | Harold E. Walters, St. Louis |
| St. Louis City | Don C. Weir, St. Louis |
| St. Louis City | Richard W. Yore, St. Louis |
| St. Louis City | Frank G. Zingale, St. Louis |

### Fourth District

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|---|---|
| Franklin-Gasconade-Warren | L. O. Muench, Washington |
| Franklin-Gasconade-Warren | Carvel T. Shaw, Hermann |
| Franklin-Gasconade-Warren | H. F. Hoelscher, Warrenton |
| Jefferson | Frank L. Kozal, Crystal City |
| Lincoln-St. Charles | Louis P. Hetlage, Troy |
| Lincoln-St. Charles | O. W. Towers, St. Charles |
| St. Louis County | William H. Bailey, St. Louis |
| St. Louis County | Edgar W. Davis, St. Louis |
| St. Louis County | M. A. Diehr, St. Louis |
| St. Louis County | Oscar P. Hampton, Jr., St. Louis |
| St. Louis County | Joseph B. Kendis, St. Louis |
| St. Louis County | Robert C. Kingsland, St. Louis |
| St. Louis County | Robert A. Mayer, St. Louis |
| St. Louis County | Charles Miller, Jr., St. Louis |
| St. Louis County | Roy A. Walther, Jr., St. Louis |
| St. Louis County | George J. L. Wulff, Jr., St. Louis |

### Fifth District

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|---|---|
| Audrain | Benjamin N. Jolly, Mexico |
| Boone | R. P. Ladenson, Columbia |
| Boone | Hugh E. Stephenson, Jr., Columbia |
| Callaway | James K. Ritterbusch, Fulton |
| Cole | George D. Shull, Jefferson City |
| Cooper | G. W. Winn, Boonville |
| Howard | W. A. Bloom, Fayette |
| Miller | |
| Moniteau | |
| Montgomery | E. J. T. Andersen, Montgomery City |
| Morgan | Jack Gunn, Versailles |

### Sixth District

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|---|---|
| Benton | |
| Henry | |
| Johnson | Mario G. Gonzales, Warrensburg |
| Lafayette-Ray | Wilfred E. Martin, Odessa |
| Lafayette-Ray | Franklin A. Crozier, Richmond |
| Pettis | C. G. Stauffacher, Sedalia |
| Saline | E. Lee McCorkle, Marshall |
| West Central | |
| Bates | R. E. Baska, Butler |
| Cass | Edward Jones, Harrisonville |
| Cedar | William B. Richter, Stockton |
| St. Clair | Donald H. Giesler, Osceola |
| Vernon | Roy W. Pearse, Jr., Nevada |

### Seventh District

| | |
|---|---|
| Jackson | Berniel W. Andrews, Kansas City |
| Jackson | Hector W. Benoit, Kansas City |
| Jackson | John F. Bowser, Kansas City |
| Jackson | Philip L. Byers, Kansas City |
| Jackson | Charles S. Cooper, Kansas City |
| Jackson | Dillard M. Eubank, Raytown |
| Jackson | John A. Griffith, Jr., Kansas City |
| Jackson | Cecil G. Leitch, Blue Springs |
| Jackson | James R. McVay, Jr., Kansas City |
| Jackson | Gerald L. Miller, Kansas City |
| Jackson | William C. Mixson, Kansas City |
| Jackson | Ralph Perry, Kansas City |
| Jackson | William F. Sanders, Kansas City |
| Jackson | Walter J. Stelmach, Kansas City |
| Jackson | Raymond W. Stockton, Kansas City |
| Jackson | Charles B. Wheeler, Jr., Kansas City |

### Eighth District

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|---|---|
| Barton-Dade | |
| Dallas-Hickory-Polk | Olin A. Griffin, Buffalo |
| Greene | John P. Ferguson, Jr., Springfield |
| Greene | Kenneth E. Knabb, Springfield |
| Greene | Stanley S. Peterson, Springfield |
| Greene | William H. Snead, Springfield |
| Jasper | Gregory A. Schulte, Joplin |
| Jasper | M. Foster Whitten, Carthage |
| Ozarks | |
| Barry | Robert R. Donley, Monett |
| Lawrence | Kenneth Glover, Mount Vernon |
| Stone | Fred Wommack, Crane |
| Christian | |
| Taney | William C. Magness, Branson |
| Newton | |
| McDonald | |
| Webster | T. M. Macdonnell, Marshfield |

### Ninth District

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|---|---|
| Mid-Missouri | |
| Phelps | M. K. Underwood, Rolla |
| Crawford | |
| Dent | B. J. Bass, Salem |
| Pulaski | |
| Maries | |
| Laclede | R. W. Froelich, Lebanon |
| South Central | |
| Howell | M. L. Fowler, West Plains |
| Oregon | Claude W. Cooper, Thayer |
| Texas | Joe Wall, Houston |
| Wright | |
| Douglas | |
| Ozark | |

### Tenth District

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|---|---|
| Butler-Ripley-Wayne | F. J. Biggs, Jr., Poplar Bluff |
| Cape Girardeau | Seth S. Barnes, Cape Girardeau |
| Dunklin | Joe A. Zimmerman, Kennett |
| Mineral Area | |
| St. Francois | Charles E. Carleton, Jr., Farmington |
| Iron | Ben M. Bull, Ironton |
| Madison | |
| Washington | |
| Reynolds | |
| Ste. Genevieve | |
| Pemiscot | O. W. Cook, Caruthersville |

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|---|---|
| Perry | A. E. McDermott, Perryville |
| Semo | |
| Stoddard | Theodore L. Waddle, Dexter |
| New Madrid | |
| Mississippi | |
| Scott | Leo A. Bruce, Sikeston |

The President, J. H. Summers, M.D., Lebanon, delivered the invocation.

Joseph C. Peden, M.D., St. Louis, gave a preliminary report of the Committee on Credentials. The Speaker announced that the roll call would be marked from the delegates' credential cards.

Leonard T. Furlow, M.D., St. Louis, reported briefly for the General Committee on Arrangements.

Speaker: The next order of business is the reading of the minutes of the previous meeting. These have been published in the July 1961 issue of Missouri Medicine and unless there are corrections or additions or deletions, they will stand approved as published. There being no objections, the minutes were declared approved.

**Dr. Mixson presided as Speaker of the House of Delegates.**

The Speaker gave instructions to the delegates and appointed the following Reference Committees:

### REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

Frank R. Daley, M.D., Hamilton, Chairman.
John A. Griffith, M.D., Kansas City.
Don C. Weir, M.D., St. Louis.
Thomas M. Macdonnell, M.D., Marshfield.
F. L. Kozal, M.D., Crystal City.

### REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

Gerald L. Miller, M.D., Kansas City, Chairman.
Charles S. Sherwin, M.D., St. Louis.
George J. L. Wulff, M.D., St. Louis County.
Jack Gunn, M.D., Versailles.
Roy Pearse, M.D., Nevada.

### REFERENCE COMMITTEE ON REPORTS OF OFFICERS

C. W. Cooper, M.D., Thayer, Chairman.
C. H. Lewellen, M.D., Louisiana.
Robert Mayer, M.D., St. Louis County.
R. P. Ladenson, M.D., Columbia.
Hector W. Benoit Jr., M.D., Kansas City.

### REFERENCE COMMITTEE ON RESOLUTIONS

Richard Yore, M.D., St. Louis, Chairman.
John N. Martin, M.D., St. Joseph.
C. G. Stauffacher, M.D., Sedalia.
A. E. McDermott, M.D., Perryville.
Landis Y. Davis, M.D., Canton.

### REFERENCE COMMITTEE ON MEDICAL EDUCATION AND PUBLIC WELFARE

Charles Miller, Jr., M.D., Kirkwood, Chairman.
R. W. Stockton, M.D., Kansas City.
W. M. Lonergan, M.D., St. Louis.
Gregory A. Schulte, M.D., Joplin.
Charles E. Carleton Jr., M.D., Farmington.

### REFERENCE COMMITTEE ON NECROLOGY

F. J. Biggs, M.D., Poplar Bluff, Chairman.
H. E. Stephenson Jr., M.D., Columbia.
M. K. Underwood, M.D., Rolla.
Kenneth Glover, M.D., Mount Vernon.
R. E. Dunshee, M.D., Maryville.

J. H. Summers, M.D., Lebanon, presented the President's Message.

### PRESIDENT'S MESSAGE

Mr. Speaker, Members of the House of Delegates:

In past years it has often occurred to me that one constructive step this House might take to expedite and streamline its deliberations would be to erase from the agenda the remarks of the retiring President of the Association. Since, no such forward-looking and statesmanlike action has so far been taken, however, both you and I are stuck with the need of attending to the brief remarks I have to make at this, the opening session, of what we must recognize will be, perhaps, the most important meeting of the House in the entire history of MSMA.

Not just because courtesy requires it—but because at the conclusion of my year as your President, I am deeply conscious of the truth and importance of this acknowledgment—I want to tell you that your officers, councilors, committee chairmen and many individual key members during the past year have served you faithfully and with a degree of vision and dedication to your interests that I believe is outstanding.

I want to tell you further that your staff—Tom O'Brien, Ray McIntyre, Helen Penn, Tom Fox—and Jordan Singleton and Gene Lunn in Lemoine Skinner's office—have during the year worked even harder, if that is possible, than I have seen them work before, and I think they worked more effectively. In my judgment, the Missouri State Medical Association gets more and better staff performance from its dues dollars than any organization, medical or non-medical, I have ever been connected with.

Next, I want to express to Donald Dowell, my successor, my personal satisfaction that he has been chosen by you to head the Association through what we all know is going to be another truly critical year. I want to pledge to him my own—and I know I may also pledge him your—full cooperation and help in any situation in which he may find them useful.

It would take too much time, and contribute very little, for me to attempt to review for you the not inconsiderable progress I believe our Association made in the last year toward the further development of an

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effective program in the service equally of the physicians and the people of Missouri. The facts of the year's record are in your handbooks. I know you will study and evaluate them with care in arriving at your policy decisions and program directives for the coming year.

If it is not appropriate for me to attempt a detailed review of the year now behind us, it would be still less so for me to try to recommend the elements of your program for the year ahead. That is the prerogative of your new President who will follow me at this rostrum in just a few moments.

There are, however, a few basic things I believe I may properly and, perhaps, valuably say before I conclude and am turned out to pasture. I want to try to give you my personal estimate of the critical state of our beloved and free profession at this juncture of rapid and headlong social change, together with some general thoughts on the kind of program and effort it will take if we are to have any hope of channeling this strong current of change into an acceptable direction.

Now, then, what is the posture and the situation of our voluntary health care system in the United States at this moment? Gentlemen, it is bad. Any objective observer can tell how bad it is just by reading the papers, and I do not mean simply papers like the *St. Louis Post-Dispatch,* that is actively campaigning with every device in the debater's book to achieve passage of legislation of the King-Anderson type, and that would clearly be among the leading voices to advocate extension of benefits and beneficiaries under Social Security until a complete system of federal medicine were achieved. No, I do not mean just papers like the *Post-Dispatch.* You can get very near as disheartened by reading the *Wall Street Journal,* which just the other day reported matter of factly that it looked as though the Social Security proposal were going to win. It said, and I quote, "Even if the (Ways and Means) Committee blocks passage this year, conservative Congressmen generally interpret the long-range trend of public opinion to mean that approval will come before many more years."

The basic and crucial difficulty we have to recognize, I believe, is that the great national debate on health care—the debate that is forming public opinion which in turn will determine legislation—the great debate, it seems to me, is in large part getting off the track, on to side issues, into emotional and intemperate extremes of expression. The result is confusion in the public mind. And confusion, if the *Wall Street Journal* is right, is working against us.

For this confused state of affairs, I believe we in medicine have some responsibility. Far greater, of course, is the responsibility of our opponents well represented by Sam Armstrong, a national correspondent of the *Post-Dispatch,* whose recent extended series on the health care issue sought to mask vigorous partisanship by a surface and specious appearance of objectivity.

I do not want to take your time unduly with a point-by-point critique of the Armstrong articles. They gave little evidence of original study. They were, in the main, simply a rehash of every old chestnut charge against medicine and the AMA that our opponents have used for years, all repeated uncritically and without objective review. To give you the idea, I want to cite one instance, typical of the character of the series as a whole.

Armstrong quotes the opinion of a professor of psychology at the University of Michigan that "medical students are not the kind of people who would become teachers, ministers, social workers, that is, professional persons interested in doing something for the good of mankind. As a group, the medical students reveal remarkably little interest in the welfare of human beings."

Dr. Summers gave the President's Message.

Now, I have no doubt the professor of psychology said exactly what Armstrong said he said. It is the pleasure the *Post* writer had in quoting it that disturbs me. Because, obviously if the medical profession has fallen to the point at which young men coming into it do not care a thing for people, then the quicker the government begins to regulate it in the public interest the better.

It is significant in this connection that Armstrong emphatically did not quote from a recently completed publication of the University of Chicago called "Boys in White" and based on an extensive study by four sociologists of students at the University of Kansas Medical School. The conclusion of this 450 page volume, which would not, of course, have served Armstrong's purpose, is summarized by the foundation that put up the money for it in the following words: "Most students enter medical school openly idealistic about the practice of medicine, an idealism which changes, but does not fade. Under the rigorous, day-to-day pressures, a student seems to develop a 'cynical' concern with the realistic matters of getting through medical school, but he does not lose his idealistic, long-range perspective. As he graduates, 'the medical student is now idealistic with a difference. His idealism is more informed and knowledgeable . . . more specific and more professional than it was when he entered.' "

I apologize for taking so long in this digression, but I did want to make a point about the dangers of letting the debate get down to emotional irrelevancies. What Armstrong and his psychologist think about doctors' characters is not to the point. But the consequent effect on public opinion is hurtful and dangerous to us. On the other hand, I think sometimes the conduct of the debate by medical spokesmen is no less off the point and no less damaging to our goal of getting balanced and sensible public understanding.

Granted, medicine seems to be unfairly subjected to attack by pressure groups and politicians. Nevertheless, as I said to the Second Councilor District meeting the other night at Moberly, I think that too many doctors too often get into a way of thinking that has too much self-pity in it and into ways of reacting that are too much like the emotional responses of adolescents than they are like the reasoned judgments of mature men of science.

Because, when you get right down to it, just what group, class or nation of men today is not in a fix—and is not having a terrible time trying to find an acceptable way out? Businessmen, workers, farmers, diplomats, politicians, clergymen, educators—everybody you can think of seems to be groping to make a new adjustment to a world that is being swept along—we can hardly tell in what direction, by the most rapid, headlong current of change in human history.

The effects of this dizzy process of change and development are dramatically apparent in the progress of science in the last two or three decades—not just medical science, but in all physical science. In consequence, the economic and social environment in which we live is undergoing constant, drastic transformation. The entire human race is restless and uneasy—eager to benefit from the new powers now available to produce a better life for all mankind—and at the same time concerned about the makeup of long-established habits and patterns of living, and anxious against the background threat of nuclear annihilation.

So I say to you very simply, we doctors have no special grievance and no privileged justification to be bitter or angry or resentful. Sure, we have misery. But we have plenty of company.

The point I am trying to make is that in a dynamically changing national and world society, it is natural that people should be confused, perturbed and fearful. Man by and large likes to know where he stands, what he can count on, what he can look forward to tomorrow. There has never been a time when it has been so difficult for men to be comfortable in security and in their expectations for the future.

The measure, however, of an educated man and a scientist is the degree to which he can look at confusing and disturbing facts with reasoned objectivity; the degree to which he can analyze the choices he is free to make; the keenness with which he defines hypotheses he can test and use in order to channel the rapid forces of change into directions that will make them fruitful rather than destructive.

I say this is the challenge we in medicine must set ourselves. The time for bellyaching and complaining and harking back to simpler, happier good old days is gone. If there is any group in modern society that by training and long habit of mind should be able to assimilate new experience, analyze new data and come up with new and constructive solutions it ought to be men of the medical profession.

I submit to you that, as individuals and as members of medical societies, we have not yet made notable progress toward putting scientific intelligence to work on our problems and the problems and pressures of modern society that bear on us and our patients.

There are, I know, many good reasons why we have not managed to do so. First, we are busy. Second, what most of us want to do is diagnose illness, treat the sick and find new knowledge that will enable us to do these things better. We are not, in short, as a group really much interested in the social, economic and political world. Finally, we tend to be so ruggedly individual, so obsessed by a certainty about the rightness of our own attitudes and conclusions—no matter what basis they may or may not have in fact—that we do not function well in the parliamentary world of democratic discussion, compromise and give-and-take.

A man cannot spend his whole life hearing day after day the grateful, trusting, meek voices of patients saying "Yes, doctor," without growing in awareness of his own infallibility.

All these, I guess, are reasons why we have not, I believe, done our full and effective part as a profession to channel and influence the direction of the sweeping social changes that affect us and our patients. They may even be good reasons.

Our job, then, is to look at the facts squarely and make up our minds precisely just what it is that we are for and what we are against. We must do our part to keep the national debate on the track. The people must be able to see the big issue clearly and see it simply. What I mean to say is that it is time now for us to come down to essentials and to concentrate on them. The time is short. We have got to get our point across. What, then, is our point?

Drs. Summers, Stuart and Dowell, from left, register for the Session.

There is no question about the quality of health care in the United States today. Even our opponents agree on that. There are only two questions. The first has to do with quantity. Do we have the people and the facilities we need to provide adequate and adequately distributed care for all the American people?

Without wasting your time, I think I can say quickly that in Missouri the medical profession is seeing to it that we can answer that question with an emphatic "yes." We have worked for and with the new four-year school at the University of Missouri to turn out more doctors; we have put up funds to help able boys pay their way through; we have worked for years to place hundreds of doctors in outstate communities that need them; we have been leaders in state and community efforts for hospital construction, for recruiting nurses and other paramedical personnel. We have, in short, done and—through our Public Service Committee—are continuing to do a fine job in the service of the people of Missouri. As to supply and distribution of health care personnel and facilities, we of the Missouri profession can say our communities, counties and state can take care of themselves.

The second question is the only basically important one in the debate. Do we have an adequate mechanism by which people can budget and pay for the cost of their needed health care? If we have, or can devise, such a mechanism, then nearly everyone would agree we do not need federal Social Security intervention. If we do not have such a mechanism, or will not provide one, then we must confess we have no answer to the only real question the voters and their Congressman are concerned with.

Last year in his talk to this House, our then retiring President, Ray Muether, said, and I want to quote him through two paragraphs:

"I believe sincerely that the greatest single stumbling block to good public relations at this time is the matter of physicians' fees. I think it is high time that we determine some mechanism whereby the patient can truly budget for his medical cost. Make no mistake—the public will do so whether it pleases us or not.

"With all the scientific advances, with all the miracle drugs, with all the wonders of medicine and science at our command, we still have not developed a mutually agreeable mechanism for the least important—so we have always said—aspect of our relationship with patients, namely, the money."

I want to say I agree with Ray. I think we must now, in Missouri and in the nation, come to grips with this issue, the real heart of the great national debate on health care. If we can satisfy the people of the nation that they can predictably and surely budget their own health care on a sensible and realistic voluntary basis, we may win. If we fail to provide such a mechanism, we shall certainly lose.

In conclusion, then, it seems to me to boil down to this. If the great debate is to be settled on a basis consistent with the continued freedom of the medical profession, we have two jobs to do—two fights to win.

First, we have got to put every ounce of effort we can muster into defeating the current administration proposal to establish the Social Security approach to financing health care. If the Social Security idea should once be implemented, it will be simply a matter of time until it is extended, step by step, into a full-fledged system of socialized medicine. We must defeat this idea and defeat it now. That will mean an expanded Association program of education. It will mean wide individual support for the American Medical Political Action Committee and our own new MMPAC. It will mean more personal work for each of us.

The second fight we have got to win is, I submit, a contest among ourselves. We have got to find our way to agreement on a program that will enable the people of our state and nation to budget on a sensible and workable and predictable basis the costs of their own health care. How we shall do this is the overriding question before this session of the House of Delegates. I do not presume to suggest to you the right answer. But I do urge upon you the importance of defining an answer and of agreeing upon it now.

The time is late. Ours is a fight on two fronts. We must win on both fronts if we are to win at all.

The Speaker referred the President's Message to the Reference Committee on Reports of Officers.

Donald M. Dowell, M.D., Chillicothe, presented the Recommendations of the President-Elect.

## RECOMMENDATIONS OF THE PRESIDENT-ELECT

Mr. Speaker, Members of the House of Delegates:

First, let me say what I believe all of you would like to have the opportunity to say at this moment:

The Missouri State Medical Association and the medical profession in Missouri owes Dr. Jake Summers a great deal for his leadership during this past difficult year. Most of us have had a chance to see him on our own home grounds as he has toured the state talking to local medical societies about the problems medicine faces. He has given us an effective program and an effective voice in our struggle against those who seek a controlled system of health care. He, with the Council, has built a foundation for the year to come that I personally am most grateful to inherit.

The Chase HOTEL

Dr. Dowell presented the President-Elect's Recommendations.

In this year to come, as I see it, the medical profession and its patients will continue to have one overriding problem. The issue is not "medical care" versus no medical care for the elderly, as some editorial writers and political exponents would have the public believe. The issue is to prevent a compulsory, destructive, and unnecessary federal social security medical program from being imposed on the American people.

To stop this is going to take time and effort and money. Fundamentally, that means the time and effort and money of every individual physician in the state.

In this situation, the American Medical Association and the Missouri State Medical Association can show the way—but they cannot do the job by themselves. Only when the county medical societies, their members, and their friends are mobilized and active can we count on success. MSMA has been furnishing the tools, and will continue to do so. It is up to the local societies and the individual doctor to pick them up and use them.

I would like for a moment to examine a few of the elements of our program—the tools we have at hand. Since most of these things are covered at some length in your Delegates Handbook or other reports, I shall try to be brief here.

The cornerstone of our effort, of course, is the Public Service program begun some years ago to provide information to the public and the profession on problems facing medicine, and to stimulate local medical societies and individual physicians to take effective action on those problems. It is through this program that we have sought to implement the Kerr-Mills law in Missouri, and it is under this program that we have concentrated our activities to let the public know the dangers of the King-Anderson proposals. Through the Public Service program we have given emphasis to medicine's positive programs in the public interest and lent assistance to county medical societies in identifying local health care problems and taking steps to solve them.

You will have before you at this Annual Session a proposal to reinforce the Public Service activity and make it a permanent part of the Association's program. I urge you to approve this recommendation and to give this program your full and active support, not only here at this meeting, but at home throughout the year. No opportunity should be lost in your daily contacts at home to point out the undesirable phases of King-Anderson, including the fact that no physicians' care is provided, and that everyone is required to pay a deductible, which may be as much as $90, for his hospitalization.

A great deal of the effort under the Public Service program is to demonstrate that medicine, in cooperation with other private groups, can and is successfully solving what problems there may be affecting the health care of the nation.

Perhaps the most discussed problem being advanced as a reason for adopting a government health care program for the aged under the social security system is the problem of financing care.

Last year, the medical profession in Missouri, along with physicians throughout the country, endorsed the Kerr-Mills law as the means of solving the problem of financing medical care for the indigent aged. I have little doubt that it will be the sense of this House that we continue the effort toward further implementation of this law in Missouri when the legislature meets next year.

The Kerr-Mills law represents the solution to the problem of financing health care for those over age 65 who are indigent or medically indigent. For the great majority of our senior citizens, moreover, who are in neither of these groups, assistance in financing care is available by budgeting or prepayment through the medically sponsored Blue Shield Plans, Blue Cross or commercial insurance companies.

We now have an opportunity to take an additional step, through the two Blue Shield Plans in the state, in making available to persons over 65 a new medical-surgical program which would be uniform, nationwide, in both benefits and dues, provide substantial protection, and be low in cost.

This, of course, is the Over-65 program developed by the American Medical Association and the National Association of Blue Shield Plans. It is a service program, under which physicians would agree to provide paid-in-full benefits for patients with limited incomes.

I cannot think of a better demonstration of medicine's concern for the aged and their problems of financing health care than the development and acceptance of this program. Through this plan the physicians themselves assure the medical and surgical care of our senior citizens at a cost that is predictable and reasonable.

Implementation of this program throughout the nation, it seems to me, would be the real answer to the King-Anderson proposals and would remove almost any excuse for a program of federal social security medicine. I would certainly hope that this House of Delegates would endorse this program and would urge both of the Blue Shield Plans of the state to cooperate fully in putting the program into effect as soon as possible.

The physicians of the eastern part of the state have, I believe, an even greater opportunity to show that medicine holds the interest of the patient and the public uppermost—by providing a combination service-indemnity program for the public generally under the St. Louis Blue Shield Plan. This is my personal feeling.

As President-Elect, and since I am not directly involved, I feel I should not argue here the merits of a service benefits program in improving the public attitude toward the medical profession or in counteracting demands for government controlled national medicine. Inasmuch as MSMA is the sponsoring organization for the St. Louis Plan, however, I would like to make two brief points.

First, the resolution of the Council which you are asked to consider does not in any way force a service benefits program into effect in the St. Louis Blue Shield area. It merely gives House of Delegates approval for the development of a specific proposal which would then be submitted to the physicians of the area for their acceptance or rejection. It will be the individual physicians of the area who decide whether to put a service benefits program into effect or not.

Second, I have heard from the eastern part of the state a number of dire predictions as to what will befall medicine if a service benefits program is instituted. Doctors will be completely under the control of some sinister outside force, there will be interference between the physician and his patient, fees set up initially will soon be reduced and the physician will starve, and other similar fates.

I can comment only that such catastrophes simply have not come to pass. We have had a service benefits program in the Kansas City Plan area for almost 20 years, and although the program may not be perfect, in my opinion it has worked well and gained credit for the medical profession in the eyes of the public.

Several of the matters you will have before you during this session deal with the activities we have been carrying on to help assure the supply and quantity of medical care for the future. These are important because they are one of the most effective ways we have to show the real concern the medical profession has for the public welfare.

For some years, the Association has been endeavoring, mostly on an individual basis, to encourage more promising young people to go into medicine. The problem is not alone that of increasing the number of applicants, but of increasing the quality of applicants as well.

While the number of applications for entrance to the three medical schools in Missouri this year was appreciably greater than in the last several years, and the quality of applicant was definitely higher, I believe we can and should do more to recruit top talent. I would recommend that additional activities along these lines be incorporated into the MSMA Public Service program with a view to stimulating increased effort on the local society level.

Most of you know that the American Medical Association has merged the American Medical Education Foundation with the American Medical Research Foundation. In addition to its research functions, the new organization will continue to be the channel through which physicians can make their contributions to the medical schools of the nation. Gifts to AMEF last year set a new record high for Missouri physicians of almost $14,900, in addition to the amounts sent directly to the schools. I would hope that MSMA members would continue to provide this kind of support to medical education in the years ahead.

Finally, we have our own Missouri State Medical Foundation to which the Association has contributed $75,000 in the last year and a half in order to provide loans for medical students. As of the first week of March, 130 loans had been made to 73 different students, with the total amount on loan now almost $62,000. It was during my term of office as Chairman of the Council that the first $50,000 was appropriated as the nucleus for this fund. I was particularly proud of the Council, I assure you.

It is apparent that a tremendous amount of good is being done through this program, and that the need for additional funds is great. I would strongly urge that the House approve the proposed $15 annual increase in Association dues—half of which would go into the student

Delegates were seated by districts.

loan fund, with the remainder urgently needed for general Association operations.

As you know, individual contributions to the student loan fund have now been officially declared tax-deductible. It is my hope that the membership of MSMA will also give the Foundation substantial personal support, so that no Missouri resident in the future need be denied completion of his medical education because of lack of funds.

I have one last recommendation, which deals not with the official business of the House of Delegates but with our personal responsibilities as physicians and representatives of the medical profession.

As I said in the beginning, our success in preserving a free system of medicine will depend on the individual physician devoting time, effort and money to the task. Each of us must take the time to become aware of the political, economic and social forces at work today. Each of us must make the effort to activate and support programs which genuinely will help with public problems—while, at the same time, we must effectively oppose what we know will harm the public interest. Finally, we must be ever humble and appreciative of the tremendous responsibility and honor of being a practicing physician and we must be willing to help finance these efforts—through organized medicine at national, state and local levels, and through other organizations which have the same objectives.

I would urge, for example, that you join and support the American Medical Political Action Committee and the equivalent state group now being formed in Missouri. I would hope that you would maintain contact, personally and through letters, with your representatives in Congress and in the state legislature. But most of all, as delegates and officers of your local societies, it is essential that you enlist the efforts of colleagues and non-medical friends at home to inform the public of the dangers of social security medicine, so that the people in turn will let their legislators know that such programs are not needed and not wanted in America.

I am most grateful for the high honor you have paid me in selecting me as your President for the coming year. I am mindful of the responsibilities you have placed upon me, and I pledge my best efforts in carrying them out. With your unified support, and that of the physicians of Missouri, I am confident that medicine can successfully meet the serious problems we face.

The Speaker referred the Recommendations of the President-Elect to the Reference Committee on Reports of Officers.

Mrs. Frederick E. Wade, Kansas City, President of the Woman's Auxiliary to the Missouri State Medical Association, presented the following report to the House of Delegates.

## REPORT OF THE WOMAN'S AUXILIARY

Mr. Speaker, Dr. Summers, Officers and Members of the House of Delegates:

It is an honor to be invited to report to you today. Our Auxiliary objective is to extend the aims of your Medical Association, and to work at all times under your leadership and direction. We have a membership of 1,805 women in all areas of the state.

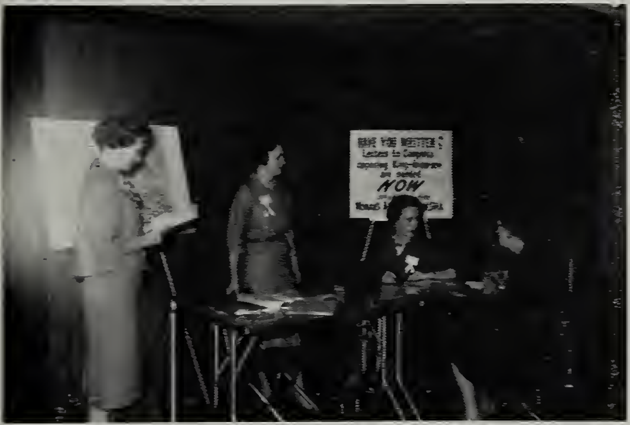
To appreciate your Auxiliary potential, I would like to take you back 40 years to May 22, 1922, to another meeting of doctors' wives, right here in St. Louis. At this meeting of 24 women, the Woman's Auxiliary to the American Medical Association was founded, and today we have a membership of almost 90,000 women in all 50 states of the Union. The AMEF program illustrates the strength of our unity. Individually, last year, we averaged $2.33; our state, $4,093.00; and nationally all doctors' wives gave $196,577.00 to the nation's medical schools.

That is only one facet of our program. We realize, in these perilous days for the medical profession, we can only be an asset to you, if we have an intelligent and informed membership. For this reason, our program centers on education and community service. Our information for programs ranges from the grass roots, up to your parent body, the American Medical Association. In all matters of general policy, the Auxiliary is governed by the most immediate medical advisory group. Each level of authority can only speak for itself. There are times, when one affiliate may take action, not endorsed at another level.

Last fall, when the State Mental Health program ran into difficulties, I was asked for our policy on the situation, as the State Medical Association, and our Auxiliary, had endorsed it in principal. I referred the matter to your Executive Council for consideration and advice. I explained to our members, we could only speak as individuals, pending your decision. Where the local county medical society had taken official action, the county Auxiliary members, were of course, free to endorse their county medical society policy as county Auxiliary members, but in their capacity as members of our state Auxiliary, we could only endorse action taken by the State Medical Association. We are an auxiliary, not an autonomous organization, and our general policies are determined by you. We deeply appreciate being advised of your official actions, in matters that relate to the Auxiliary field of interest.

Auxiliary leaders are briefed and trained for their responsibilities by the National Auxiliary, as well as the officers and staff of the American Medical Association. Special instruction and briefing at National Convention, is followed by a Conference of State Presidents in Chicago, each October. Lines of communication are constant by mail. Our state Auxiliary has the responsibility for passing the information on to the county auxiliaries, and our members-at-large. If your early morning breakfast, and that frequently delayed dinner, are not being served to you, by a member of our Auxiliary, I would like to suggest the best investment you can make today is to pay the $2.00 membership fee for your wife to join our state Auxiliary.

One of the projects we have undertaken for the Medical Association, at the request of Dr. Meuther, during his Presidency, was securing information for publication of a state-wide directory of Health Resources. At present, the survey has been completed for 36 counties, and forwarded to the state office for processing. Although, this leaves 40 counties still to be surveyed, we have gone as far as we can go in Auxiliary. We closed our participation on March 5, so you might make other plans for completion at this present meeting. I am truly proud of the hundreds of hours, weeks and months of hard work given this project by our Auxiliary members. I think you will agree with me, that they should be congratulated for the whole-hearted support given the project in most areas.



The Woman's Auxiliary manned a letter writing booth during the Session.

We encountered many obstacles and problems on the Health Resource project, as well as aid and assistance from many. Dr. W. E. Bryant, director of Community Studies in Kansas City, advised me that one or two million dollars has been allocated to Missouri for research in problems relating to senior citizens. You might wish to consider suggesting that these available and already allocated funds be used for a professional study. The Auxiliaries that worked so hard to complete the project in their areas eagerly await your plans for publication, so the information they secured may be of benefit.

Ten years ago, we started our Medical Student Loan Fund program. Our first loan was granted in August 1951, and since that time we have aided 14 medical students. We have received the return of full payment on four loans, and at present have $7,800.00 out on loan to 10 medical students. We granted two new loans this year, and at present have a balance in our Fund of $3,122.57.

To prevent duplication of effort, I think it would be helpful to coordinate our medical student loan fund activities, on the informational level, at least. When the AMA program was announced, I was asked if we should continue ours. A memorandum from Dr. Blasingame stated that one of the projects of AMA-ERF would also be medical student loans. The appeals from alumni associations also request funds for medical student loans. Requests from so many sources can lead to resistance. What should have priority? We would appreciate your guidance in this.

Our real priority project this year has been legislation. Dr. Durward Hall spoke at our fall Board meeting. Our members have kept a barrage of mail going to Washington and Jefferson City. We have stressed resolutions, letters to the editor, study groups, and we have enlisted the support of our friends and other organizations in the battle. Mrs. Glenn O. Turner, our legislation chairman, is providing the volunteers for the letter writing booth here at convention. One of your good deeds would be dropping by with your friends and writing another letter, and helping us make it a real barrage.

I want to thank you for the warmth of this reception. I had quite a chilly time at Senator Long's open session hearing in Kansas City. One senior citizen told me I should be ashamed to admit I was a doctor's wife! However, while the Voice of America may beam Truth back to the Iron Curtain, it is most apparent that we must do it here! We must correct the charge of self interest. We are judged by our words, as well as our deeds.

I disagree with the title given Dr. Annis's speech on Tuesday night, "Speaking Up for American Medicine." We are speaking up for America, and those medicine seeks to serve. If we speak up for American medicine, and labor speaks up for American labor, and senior citizens for senior citizens, how can we ever achieve a common ground of understanding? Last June at National Convention this title was first used, "Speaking Up for Medicine"—and I protested then, and I protest now, but my campaign has had no success for it is continually used.

I have been an American from the day of birth. I have been the wife of a physician for 22 years. I have been President of your Woman's Auxiliary for one year. In all these roles, my ideals have been exactly the same. The American Heritage of Freedom, given me at birth, also carried with it a responsibility for preservation. Auxiliary has aided me in meeting some of this responsibility, and I am grateful. Thank you for the inspiration you give us, and all our good wishes for a most successful convention. Thank you.

The Speaker referred the Report of the Woman's Auxiliary to the Reference Committee on Reports of Officers.

The report of the Secretary, John I. Matthews, M.D., Jefferson City, follows:

## REPORT OF THE SECRETARY

On December 31, 1961, the official membership of the Association was as follows:

### STATUS OF MEMBERSHIP

| | |
|---|---|
| Number of Members, January 1, 1961 | 3,782 |
| New Members | 162 |
| Members Reinstated | 2 |
| Total | 3,946 |
| Members Dropped | 10 |
| Members Deceased | 71 |
| Members Transferred | 43 |
| Members Resigned | 7 |
| Total | 3.815 |
| Number of Members, December 31, 1961 | 3.815 |

The Committee on Nominations, which is appointed by the President from the House of Delegates, must submit nominations for the following offices:

Three Vice Presidents to fill the expired terms of Claude W. Cooper, M.D., Thayer; Benjamin N. Jolly, M.D., Mexico, and David N. Kerr, M.D., St. Louis.

A Speaker of the House of Delegates and a Vice Speaker of the House of Delegates to fill the expired terms of William C. Mixson, M.D., Kansas City, Speaker, and Stanley S. Peterson, M.D., Springfield, Vice Speaker.

Two Delegates and corresponding alternates to the American Medical Association to fill the vacancies created by the expiration on December 31, 1962, of the terms of Durward G. Hall, M.D., Springfield; Alternate, Guy N. Magness, M.D., University City; and H. E. Petersen, M.D., St. Joseph; Alternate, J. Loren Washburn, M.D., Versailles.

The terms (two years) of the Councilors of the odd numbered districts expire this year:

Joseph L. Fisher, M.D., St. Joseph, First District; Leonard T. Furlow, M.D., St. Louis, Third District; B. M. Stuart, M.D., Boonville, Fifth District; K. C. Hollweg, M.D., Kansas City, Seventh District; E. A. Stricker, M.D., St. James, Ninth District. Delegates from these districts shall meet during the meeting, prior to the last day, and elect the Councilor for their District. The election shall be certified to the House of Delegates on a prescribed form which will be furnished. Lists of delegates from the various districts will be available to the Councilors.

The entire session will be held in Hotel Chase, St. Louis. The House of Delegates will hold its first session on Sunday, March 18, at 1:30 p.m., in the Chase Club. Reference Committees will meet in committee rooms in the hotel. The second session of the House of Delegates will convene at 4:00 p.m., on Monday, March 19, in the Regency Room. The final session of the House, a breakfast meeting, will be held in the Chase Club of the hotel at 7:30 a.m., on Wednesday, March 21.

Registration will be open on Sunday, March 18, from 12:30 p.m. to 3:30 p.m.; on Monday and Tuesday from 8:00 a.m. to 5:00 p.m., and on Wednesday, March 21, from 7:30 a.m. to 11:00 a.m. Registration will be in the Lobby, Hotel Chase.

John I. Matthews, Secretary.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Executive Secretary, Mr. Tom R. O'Brien, follows:

## REPORT OF THE EXECUTIVE SECRETARY

The personnel of the office, Mr. Ray McIntyre, Miss Helen Penn, Mrs. Bertha Thomas, Mrs. Mary Laskiwitz, Mrs. Shirley Volk, Miss Janice Cox and Mr. Thomas P. Fox, who joined the staff on July 1, 1961, are deserving of the thanks of the members for devoted service to the Association. I thank each of them for their invaluable help to me.

The reports of the Council, Standing and Special Committees describe the various activities of the Association. Either Mr. McIntyre or I, and often Mr. Fox and Miss Penn, attend all committee meetings.

I extend my most sincere thanks to the Officers and the many members who have been so helpful to the staff and to me.

Tom R. O'Brien, Executive Secretary.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Treasurer, Charles R. Doyle, M.D., St. Louis, follows:

## REPORT OF THE TREASURER

The report of the Treasurer is covered in the Financial Statement which appeared in the March issue of Missouri Medicine. Also, the Financial Statement and the budget were sent to all county medical societies and to all delegates in the Delegates' Handbook, conforming to the by-laws that these shall be received by county medical societies 30 days prior to the Annual Session. Since the societies have had the report and it appears in Missouri Medicine prior to the session, it is not repeated in these reports.

Charles R. Doyle, Treasurer.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Committee on Publication, Charles R. Doyle, M.D., St. Louis, Chairman through 1961, follows:

## REPORT OF THE COMMITTEE ON PUBLICATION

The 58th volume of Missouri Medicine was completed with the December 1961 issue. During 1961 there were published 38 scientific articles, four case reports, 13 special articles, 20 editorials, 11 President's messages, 11 Washington, 12 Across Missouri, 11 Woman's Auxiliary, 11 Ramblings of the Field Secretary, 180 news items, 95 County Society Proceedings, 156 new members, 62 deaths, 29 From the Medical Schools, five organization activity articles, 11 miscellaneous articles, four reports of the Council, three articles on legislation, 11 Missouri Academy of General Practice, three tuberculosis abstracts, 16 book reviews, 67 books received, three rosters, program of the Annual Session, minutes of the Annual Session, financial report for the previous year, one correspondence, one article from the Division of Health, 10 Curiosa et Trivia, 11 Capsule Clinics, one listing of Technical Exhibits, 11 Missouri Medicine in Review. There were 538 pages of advertising, 738 pages of reading material and 60 pages of inserts.

At the December meeting of the Council, the resignation of Dr. Charles R. Doyle as Editor was accepted and Dr. Joseph V. Finnegan, St. Louis, was elected Editor as of January 1, 1962.

Advertising in Missouri Medicine from January 1, 1961, to December 31, 1961, earned $45,944.82. Subscriptions of nonmembers amounted to $310, making $46,564.82 earned by the publication. The cost of production (printing and engraving) was $36,603.26.

Charles R. Doyle, Chairman,
Richard H. Kiene,
C. G. Stuaffacher,
R. O. Muether,
Ben M. Bull.

The Speaker referred this report to the Reference Committee on Medical Education and Public Affairs.

The report of the Committee on Scientific and Postgraduate Work, John I. Matthews, M.D., Jefferson City, follows:

## REPORT OF THE COMMITTEE ON SCIENTIFIC AND POSTGRADUATE WORK

Many organizations have sponsored speakers for the Annual Session and the Committee is deeply indebted and grateful to these organizations for their efforts in selecting and securing outstanding participants. It is hoped that the Annual Session may become the nucleus around which many organizations may build their annual programs. Indeed this has been occurring with increasing frequency in the last few years with satisfaction and success for all concerned. It is hoped that this centralization of effort can be continued and extended in the future.

The Committee has worked with the Education Committee of the Missouri Academy of General Practice and the Committee on Postgraduate Medical Education of the University of Missouri Medical School to bring practical scientific programs to all areas of the state in cooperation with various County Medical Society program committees. All university medical schools in the state have been active in teaching at the postgraduate level and it is noted that an increasing number of postgraduate programs are being held at the University of Missouri Medical Center. The Committee continues to promote joint Medical Society meetings over outstate Missouri where larger audiences can be assured for special programs. The Committee has continued its cooperative endeavor with St. Louis University School of Medicine Cardiovascular Section and the MAGP Education Committee in presenting a number of special panel discussions on heart disease before various county medical society meetings.

The Committee feels that Missouri physicians had many opportunities to attend easily accessible, interesting and practical scientific postgraduate programs over the state this last year. Suggestions, criticisms, ideas for extension and improvement of this endeavor are always welcome.

The Committee expresses its thanks and appreciation to all of those physicians who have appeared on scientific postgraduate programs throughout the state.

John I. Matthews, Chairman,
Gerald L. Miller,
M. Pinson Neal,
Wyeth Hamlin,
Peter G. Danis,
Melvin G. Kasten,
Virgil Jeans,
John J. Modlin,
Robert W. Smith,
Richard W. Yore.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Defense, C. E. Hyndman, M.D., St. Louis, Chairman, follows:

## REPORT OF THE COMMITTEE ON DEFENSE

The Committee on Defense has had no case reported to it during the year and has had no meeting of the Committee.

Charles E. Hyndman, Chairman,
L. P. Forgrave,
Harold W. Miller,
Roland S. Kieffer,
W. W. Gist.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Committee on Public Policy and Public Relations, Byron M. Stuart, M.D., Boonville, Chairman, follows:

## REPORT OF THE COMMITTEE ON PUBLIC POLICY AND PUBLIC RELATIONS

Since the Chairman of this Committee has maintained close liaison with the public relations and communications activities carried on through the year under the direction of the Council, the officers and the Executive Secretary, and has served as an active member of the special Public Service Committee the need for a formal meeting of the Committee as a whole has not been felt.

In times past, the Committee on Public Policy and Public Relations has served an important function—to provide, in case of need, a representative cross-section of medical opinion and a responsible member in each area of the state to assist in any out-of-the-ordinary program of public information or communications that might be established by the House of Delegates or the Council.

Since the establishment of the Committee, however, times have changed. It is becoming more and more essential that problems of public relations and public education be dealt with by the more specialized committees of the Association with competence in particular areas. This has been especially true as national and state legislative programs have assumed greater importance to medicine and a resurgence of local and state programs to improve the feelings of the public toward the profession has become necessary. In the last several years, for example, major over-all problems in connection with public attitude toward the profession and with legislation have been handled by the special Public Service Committee of the Association. On specific problems in connection with the elderly, especially in regard to the Forand and King-Anderson proposals, the Public Service Committee has been aided by the Committee on Aging, while in connection with the Kerr-Mills program, the Committee on Medical Economics has rendered invaluable assistance.

In view of such trends, it has become a question as to whether it would not make for more efficient organization if the functions of the Public Policy and Public Relations Committee were absorbed by a broadened and permanent Public Service Committee.

Byron M. Stuart, Chairman,
Harold B. Rapp,
J. Will Fleming,
R. J. Crider,
W. D. Bradshaw,
Floyd C. Atwell,
C. B. Schoeberl,
William R. Lyttle,
E. D. Imes,
Armand E. Brodeur.

The Speaker referred this report to the Reference Committee on Amendments to the Constitution and By-Laws.

(The following supplementary information on the budget and expenditures of this Committee is appended to this report in compliance with a resolution adopted by the 1962 House of Delegates which appears on page 660.)

The activity and budget of this Committee continued in 1961 at approximately the same levels established by the Council and approved by the House of Delegates for the last several years.

### PUBLIC RELATIONS STAFF—GENERAL SERVICES

Research and preparation of background materials, preparation of speeches for officers and other Association spokesmen, drafting of committee and special reports, preparation of news releases, communications with the membership, associated travel, attendance

| | |
|---|---|
| at Council, committee and special A.M.A. meetings, and general services integrated in the day-to-day work of the Association office, including services of three executives of the Association's public relations agency together with related administrative, secretarial and clerical assistance | $8,250.00 |

### PUBLIC RELATIONS STAFF—ANNUAL SESSION SERVICES

| | |
|---|---|
| Special compensation authorized for a number of years in the past and approved in the previous reports of the Committee through 1961 to cover the extensive services of three key members of the Association's public relations agency, with supplemental stenographic and clerical support, to assist the Association in managing the peak load in the three months preceding and during the Annual Session, including preparation of reports, assembly of the Delegates' Handbook, preparation of news releases, etc. | $1,000.00 |
| Miscellaneous expenses for postage, pamphlets, books, mimeographing etc. | $ 387.12 |
| Total | $9,640.12 |

The report of the Committee on Medical Education and Hospitals, Kenneth Glover, M.D., Mount Vernon, Chairman, follows:

## REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The Committee takes this opportunity to present information regarding the Medical Student Loan Fund program, started by the Missouri State Medical Association in the fall of 1960. Since that time the Missouri State Medical Foundation has been formed and has taken over the student loan program. This Committee is much interested in this Medical Student Loan program and is pleased to have had a part in its formation and expects to give it continued support.

The status of the Foundation as of December 1, 1961 was reported to the Council of the Missouri State Medical Association at its meeting on December 2 and 3, 1961. The Council allotted $50,000 from State Medical Association funds to the Foundation which was made available to the Foundation during the latter part of the calendar year 1960 and was available for loans to medical students for the school year 1960-1961. Many additional loans were requested for the school year 1961-1962 and a good number have been made so that by December 1, 1961, the total amount of student loans granted was $44,430.00 to 66 medical students.

The Committees on Medical Education and Hospitals and Rural Medical Service met jointly during the year.

Total receipts at that time were $51,700. This figure represents $50,000 from the State Medical Association, $1,500 from a private donor, $100 from another private donor and $100 from the Lincoln-St. Charles County Medical Society. Balance in the fund as of December 1 amounted to $7,270 with a large number of loan applications pending.

After discussing this matter thoroughly and receiving additional information on student loans pending before the Foundation, with remarks from Dean Wilson at the University of Missouri Medical School on the continuing loan needs of students there, the Council allotted the Foundation another $25,000. Also, since December 1 the Foundation has received a $50 grant from the Jefferson County Medical Society which means that the total receipts of the Foundation amount to $76,750 as of January 1, 1962. The Council of the Missouri State Medical Association decided at its December meeting to recommend to the House of Delegates in March a $15.00 dues increase per member beginning in 1962. It will be recommended that one half the increase be allotted to the Foundation for student loans.

Legal counsel for the Foundation is making every effort to secure tax exemption status for the Foundation with the Internal Revenue Service. As soon as such status has been secured, it is reasonable to assume that the Foundation can well solicit donations from many sources. It is hoped that the tax exemption status may have been granted by the time this House considers this report.

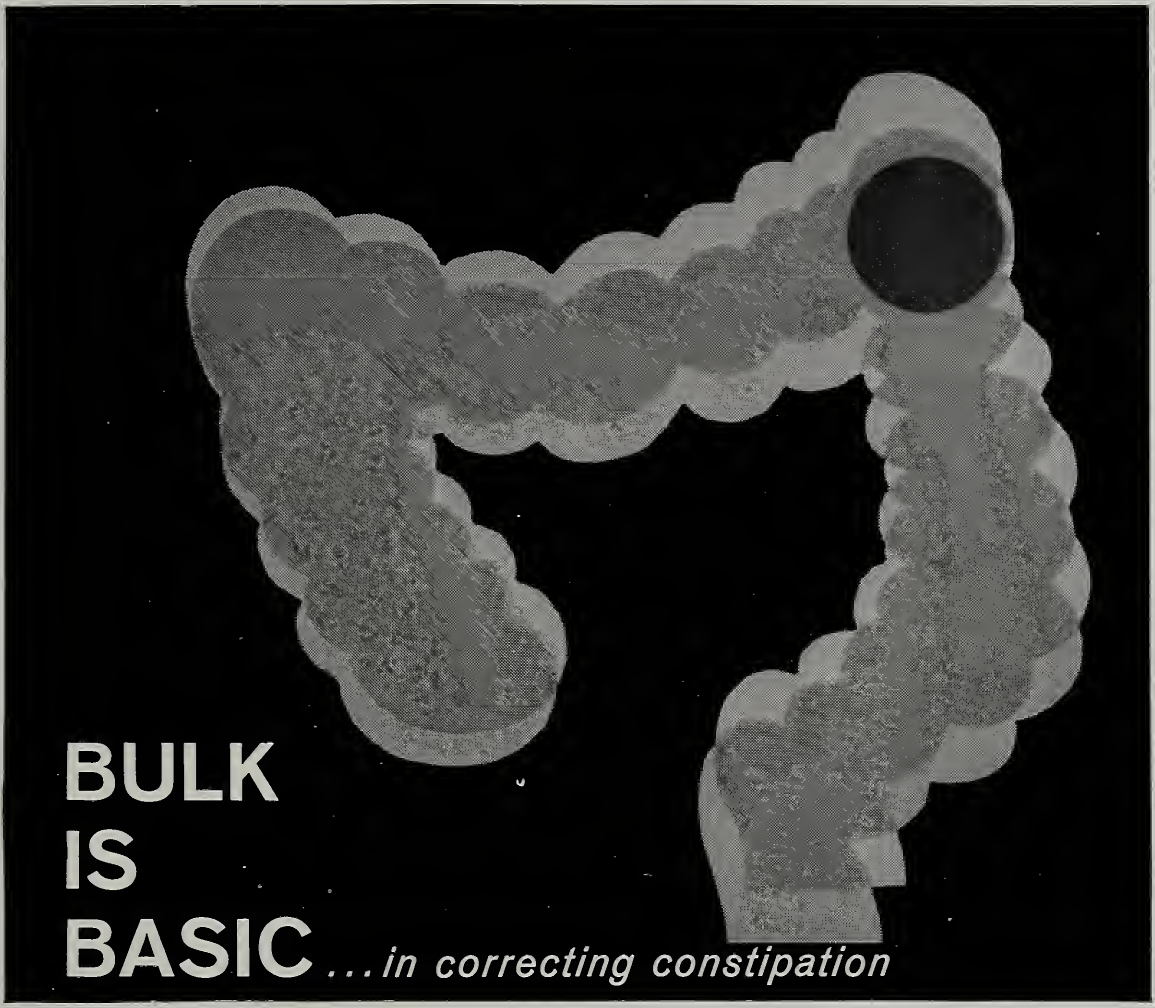
The Committee continues its cooperation with the University of Missouri Medical School, particularly in reference to the preceptorship program. For the school year 1961-1962, the medical school has requested assistance in securing 20 members of the State Medical Association in rural areas to serve as preceptors. It is well to point out again that the preceptor program at the University of Missouri Medical School is a voluntary one with those students selecting it spending a six weeks period with a private practitioner who has agreed to serve as a preceptor. The university prefers towns of less than 3,500 population for its appointment of preceptors. In some instances preceptees have been assigned to physicians in a few towns of more than 3,500 population.

The Committee has contacted many physicians over the state inquiring if they would take a preceptee. The names of those physicians who indicate that they will serve as preceptors are turned over to the Dean of the University of Missouri Medical School.

The official appointments of preceptors are made by the medical school. The Committee feels that the preceptorship program has much to offer a medical student and it is hoped that more and more of the medical school seniors at the University of Missouri will select this six week training program during their senior year.

The Committee also suggests that those physicians in out-state Missouri who have not served as preceptors but would be willing to do so make this known to this Committee at the headquarters office of the State Medical Association.

Kenneth Glover, Chairman,
Joseph C. Peden,
Vernon E. Wilson,
William A. Knight Jr.,
Ralph Perry.



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1. Best, C. H., and Taylor, N. B.: The Physiological Basis of Medical Practice, ed. 6, Baltimore, The Williams & Wilkins Company, 1955, p. 578.

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UNIVERSITY OF MARYLAND

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Mental Health, James N. Haddock, M.D., St. Louis, Chairman, follows:

## REPORT OF THE COMMITTEE ON MENTAL HEALTH

The Committee met on July 9 and November 5, 1961.

### Meeting of July 9

Hypnosis: Dr. Haddock read a letter from Dr. A. L. Brown, Springfield, concerning a statement of the position of the American Psychiatric Association on hypnosis. The statement follows:

A Statement of Position by the American Psychiatric Association, February 15, 1961.

#### STATEMENT

Hypnosis is a specialized psychiatric procedure and as such is an aspect of doctor-patient relationship. Hypnosis provides an adjunct to research, to diagnosis and to treatment in psychiatric practice. It is also of some value in other areas of medical practice and research.

Unfortunately, so little is known of the nature of the hypnotic state that definitions usually reduce themselves to mere descriptions of the various manifested phenomena. Few reports of controlled experiments into the nature of hypnosis have been published.

Hypnosis is appropriately and properly used in the course of therapy only when its employment serves therapeutic goals without posing undue risks to the patient. With selected patients, it can be used for sedative, analgesic and anesthetic purposes; for the relief of apprehension and anxiety; and for symptom suppression. It can also be used, but on a still more highly selective basis, as an adjunct in the treatment of patients with neurotic or psychotic illness.

Hypnosis or hypnotic treatment, as in any other psychiatric procedure, calls for all examinations necessary to a proper diagnosis and to the formulation of the immediate therapeutic needs of the patient. The technique of induction of the trance state is by far the least important of the many facets of the hypnotic procedure and under no circumstances should it be taught independently.

Whoever makes use of hypnotic techniques, therefore, should have sufficient knowledge of psychiatry, and particularly psychodynamics, to avoid its use in clinical situations where it is contraindicated or even dangerous. Although similar dangers attend the improper or inept use of all other aspects of the doctor-patient relationship, the nature of hypnosis renders its inappropriate use particularly hazardous. For hypnosis to be used safely, even for the relief of pain or for sedation, more than a superficial knowledge of the dynamics of human motivation is essential.

Since hypnosis has definite application in the various fields of medicine, physicians have recently shown increasing interest in hypnosis and have turned to psychiatrics for training in hypnosis.

To be adequate for medical purposes, all courses in hypnosis should be given in conjunction with recognized medical teaching institutions or teaching hospitals, under the auspices of the department of psychiatry and in collaboration with those other departments which are similarly interested. Although lectures, demonstrations, seminars, conferences and discussions are helpful, the basic learning experience must derive from closely supervised clinical contact with patients. Since such psychiatrically-centered courses are virtually non-existent, many physicians have enrolled in the inadequate brief courses available, which are taught often by individuals without medical or psychiatric training. These courses have concentrated on hypnotic-trance techniques and have neglected or covered psychodynamics and psychopathology in a superficial or stereotyped fashion.

Scientific sessions were well attended.

Proper safeguards for the use of hypnosis are vitally important to the patient, to all physicians, and to psychiatry as a specialty. In the interest of encouraging the safe use of hypnosis, the following recommendations are approved.

#### RECOMMENDATIONS

1. Isolated courses limited to the teaching of trance induction techniques are strongly disapproved.
2. The teaching of hypnosis should take place in medical schools and other psychiatric training centers that have an interest in the teaching of hypnosis. When taught in such a climate, where students can acquire adequate knowledge of psychiatric principles, hypnosis may become a useful adjunct to therapy.
3. The teaching of hypnosis should be of sufficient duration and depth for students to acquire adequate understanding of its appropriate place in relation to other psychiatric treatment modalities; of its indications and contraindications; of its values and its dangers. Decisions regarding the depth and extent of the teaching of hypnosis should remain flexible, and should be made by the psychiatric departments teaching such courses.
4. Training in all aspects of hypnosis should be made available to physicians and dentists requesting it.
5. An expansion of facilities for the teaching of hypnosis is needed particularly at the postgraduate level. The establishment of postgraduate courses in medical schools and other teaching centers under the direction of the department of psychiatry is recommended.
6. Physicians practicing hypnosis should do so only in their particular field of medical competence.
7. The need for continued study of hypnosis and for adequate research is emphasized, with particular reference to delineating its place in the total treatment program.

In discussion it was brought out that it had been recommended that courses in hypnosis be given only under medical school postgraduate medical courses or similar supervision; also that there seemed to be some less tendency in its use. A legal opinion in Texas which stipulated that hypnosis should be used only by a qualified physician was discussed and it was suggested that a copy of the opinion be obtained, if possible.

It was agreed by the members of the Committee present that it should be recommended to the Council that the statement of the American Psychiatric Association be accepted.

Clay County Resolution: The following resolution, introduced at the 103rd Annual Session of the Association and referred to the Committee by the House of Delegates, was presented:

WHEREAS, Mental health is very important to all of us, and

WHEREAS, Mental health is as much within the scope and province of medicine as is physical health—there being an impossibility to separate them in cause and effect, and

WHEREAS, The mental health of our citizens is becoming more and more propagandized through a so-called mental health movement which chief aim is to stereotype mental illness thus making anyone who deviates from this stereotype which they present as the ideal normal, and who intend to do this through questionnaire, and who have not as their wish the desire to care for the sick and the helpless but rather merely want to gain power, now be it therefore

*Resolved,* That the MSMA go on record as being only in favor of those mental health programs which are fostered and carried on by truly scientific organizations which are in the hands of competent medical doctors and not pseudo-scientific psychological organizations.

Following discussion it was decided that the resolution was not sufficiently specific as to intent and the Chairman was asked to confer with Dr. R. D. Dwyer who had presented the resolution to obtain further information.

Woman's Auxiliary: Mrs. Wade reported on some of the work of the Woman's Auxiliary and called attention to similar committees in the Auxiliary to those in the Association and offered the services of the Auxiliary. She pointed out that the Auxiliary had contact with many other women's groups.

Legislation: Legislation dealing with mental health which had been introduced in the 1961 General Assembly was discussed. It was pointed out that there had been nine bills introduced and two had been passed. The two that were passed were S.B. 54 which dealt with the transfer of non-resident patients, and S.B. 58 dealing with the release of criminal patients making it necessary that the court as well as the hospital be concerned in such dismissals. Bills that did not pass included S.B. 52 which set out a platform for mental health, which was opposed by the Division of Health; S.B. 55 dealing with local mental health programs, including clinics; S.B. 56 dealing with sexual psychopathic persons; H.B. 201 dealing with marriage counseling.

State Hospitals: Dr. Haddock pointed out that the finances of state mental hospitals had been improved, the amount available rising from $39,000,000 in 1957-59, to $54,000,000 in 1961-63. He also called attention to the fact that admission rates were increasing but that the population rate of the hospitals was decreasing, which is the trend nationally as well.

Physicians and State Hospitals: The lack of liaison between psychiatrists and other physicians and the state hospitals was discussed. It was felt that more communication between the two groups would be advantageous and it was decided that this should be encouraged.

Admittances: Methods of admittance to state hospitals so far as means tests are concerned was discussed. It was felt that more information was necessary before this could be discussed adequately or any decision reached and the chairman was asked to obtain this information. The question of full-time physicians at state hospitals doing private practice and the employment of foreign born physicians at the hospitals were discussed.

Conferences: Dr. Haddock reported that he had attended the 7th conference held by the AMA in January of chairmen of state mental health committees. He announced the first National Mental Health Congress would be held this fall and recommendations presented by the Joint Commission "Actions for Mental Health," will be studied.

### Meeting of November 5

The Committee reviewed the final report of the Joint Commission on Mental Illness and Health, as outlined in a digest of the final report, "Action for Mental Health" and a summary of it which was compiled by Chairman Haddock. The Committee takes exception to many of the findings and recommendations outlined in the report. In general, the Committee wishes to submit the following statement and recommendations:

1. The vast changes which have taken place at the state and local levels in the care and treatment of the mentally ill are not adequately presented. For example, the State of Missouri has increased its budget for mental health from $39,000,000 in the 1957-59 biennium to $54,000,000 in the 1961-63 biennium. This indicates that the respective Governors and the legislatures have been supporting the recommendations of the State Mental Health Commission.

Dr. Summers presided at the Annual Banquet.

At the local level, many private hospitals have added facilities for mental health treatment. Insurance programs have increased the benefits for psychiatric care and treatment as a result of the desire of the public to receive care on a private basis.

Therefore, the Committee rejects the recommendation contained in the report that "the Federal Government should become increasingly responsible financially for the mental health program until after ten years it would provide 58.3 per cent of the total cost." Instead, the Committee believes that the care and treatment of the mentally ill is a local and state problem and it should be continued in that way. The only participation of the federal government should be in the field of research and education as has been customary in the past.

2. The suggestion that the question of management of state hospitals should be explored in order to deter-

mine whether or not physicians should be in charge was considered by the Committee. It is recommended that the supervision of a mental hospital should continue to be under the direct supervision of the physician in charge.

3. Considerable comment included in the report relates to an idea that "laymen" (non-physician) should be primarily responsible for the preparation of information about mental health for dissemination to laymen. The Committee is aware of the valuable contributions of laymen with special skills in the dissemination of knowledge about mental health, but recommends however, that the content, and, indeed, the style of presentation and general manner of dissemination of information to the public should be based on recommendations of the medical profession.

S.B. 52-55: The Committee considered the request of Dr. Duval that it attempt to seek a satisfactory solution to the objections of the Director of Health to S.B. 52 and 55 which were not adopted by the General Assembly in 1961.

The Committee wishes to point out that the two divisions are cooperating in a splendid manner in the transfer of non-psychotic patients from mental hospitals to nursing homes and in the follow-up nursing care program for patients discharged from state hospitals. In this field the public health nurses make follow-up calls on the discharged patients to ascertain that proper care is being continued.

It is hoped that these examples of good cooperation between the two divisions will lead to a mutually satisfactory solution to the wording of S.B. 52 before the 1963 General Assembly meets.

Consideration of S.B. 55 was delayed until the next meeting. In the meantime, Dr. Guhleman was asked to secure information regarding community mental health clinics.

JAMES N. HADDOCK, Chairman,
ROBERT J. MUELLER,
HENRY V. GUHLEMAN,
GEORGE W. FORMAN,
D. R. EDWARDS,
A. L. BROWN,
FRANK M. GROGAN,
ALBERT PRESTON,
N. VENAY BOLIN,
JAMES M. A. WEISS.

This report was presented to the Council at its meeting on January 20-21, 1962, and action of the Council appears in the Supplemental Report of the Council in the Handbook.

The Speaker referred this report to the Reference Committee on Miscellaneous Affairs.

The report of the Committee on Maternal Welfare, William B. See, M.D., Columbia, follows:

## REPORT OF THE COMMITTEE ON MATERNAL WELFARE

The Committee met in Jefferson City on January 14. Members present were: Drs. William See, Columbia; Alva C. Trueblood, St. Louis; E. E. Wadlow, St. Joseph; Associate members, C. G. Stauffacher, Sedalia; MacDonald Bonebrake, Springfield; and by invitation the secretary of the Eastern Division for Maternal Death Studies, Seymour Monat, St. Louis; L. M. Garner, Director, Maternal and Child Health, Division of Health of Missouri; Mr. Raymond McIntyre and Helen Penn of Missouri State Medical Association office, and Mr. Will Marshall, Statistician of the State Division of Health.

The Committee on Maternal Welfare met on January 14.

Annual Maternal Welfare Luncheon: Acceptance of invitation by Dr. Philip Schrier to be discussant at luncheon meeting during Annual State Medical Association meeting was announced. Two interesting cases, one from each division of the maternal death investigating sections will be presented.

Maternal Death Rates: Comparison of death rates for the last two available years was made and it was felt the apparent increase in rate for 1960 might well be the result of more accurate reporting due to the addition to the standard death certificate form of the question relating to pregnancy at time of death or previous 90 days.

County Medical Society Programs: There has been an occasional request for local medical society programs on Maternal Welfare, but this means of disseminating maternal welfare information needs more use and the Committee wishes to reiterate its desire to furnish such programs at any time.

Case Reports for MISSOURI MEDICINE: The desirability of publishing maternal death studies each month was affirmed and responsibility of carrying through this procedure was outlined.

Confidentiality Legislation: Considerable discussion of promotion of legislation to protect records of committees for scientific study of patient records was held. Motion was made and passed that if such legislation could be passed without it becoming controversial and hard fought that it should be done.

WILLIAM B. SEE, Chairman,
JAMES B. KEELER,
ALVA C. TRUEBLOOD,
E. E. WADLOW,
IRWIN T. CRAIG,
C. G. STAUFFACHER,
H. E. WILLUMSEN,
PAUL E. KRATZ,
J. J. WIMP,
MACDONALD BONEBRAKE,
EUGENE HAMILTON,
ALEXANDER B. SINCLAIR.

This report was presented to the Council at its meeting on January 20-21, 1962, and action of the Council appears in the Supplemental Report of the Council in the Handbook.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Infant and Child Care, E. H. Schwartz, M.D., Springfield, Chairman, follows:

## REPORT OF THE COMMITTEE ON INFANT AND CHILD CARE

The Committee on Infant and Child Care met at the Missouri Hotel in Jefferson City on August 13 with representatives of the Missouri Division of Health, the State Department of Education and the Missouri Academy of General Practice. The specific purpose of the meeting was to consider implementation of the compulsory immunization law for school children in Missouri which was to become effective October 13, 1961. This law requires the Division of Health of the Department of Public Health and Welfare to supervise and secure the enforcement of the required immunization program.

At the request of the Division of Health, the Committee met with the groups as indicated on August 13 to study the provisions of the law and to discuss ways and means of satisfactorily implementing this immunization law. Members of the Committee made numerous recommendations which were accepted and which is felt will be helpful in carrying out the immunization requirements for school children. It is realized that there will be many problems concerned with the activation of this law and definite cooperation on the part of the physicians over the state, school children, their parents, school officials, the State Department of Education, the State Division of Health, and other groups will be essential.

The Committee therefore respectfully requests the cooperation of all members of the Missouri State Medical Association in helping to fulfill the requirements of this school children immunization law.

The full text of the minutes of the Committee's August 13 meeting appear in the Report of the Council of its meeting on September 16-17, 1961 (page 609, Report of the Council).

E. H. Schwartz, Chairman,
Daniel B. Landau,
H. E. Petersen,
R. J. LaDriere,
Guy Magness,
Clement E. Brooke,
James J. Pascoe,
Jack N. Wiles,
James A. Kinder,
S. F. Cockerell.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Health and Public Instruction, J. R. McDaniel, M.D., St. Joseph, Chairman, follows:

## REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

The Committee takes this opportunity to congratulate the Jackson and Clay County Medical societies in Missouri, who in cooperation with the Wyandotte and Johnson County societies in Kansas, working with dental societies, area hospitals, medical schools, governmental agencies, research centers and other groups in the medical and paramedical fields, presented a most successful greater Kansas City Health Fair March 18-26, 1961, at the Municipal Auditorium in Kansas City, Missouri.

New frontiers in health progress and new horizons in health careers were depicted, and in many instances, dramatically displayed in the 200 health fair exhibits. Thousands of school children viewed the exhibits, free, via prescheduled conducted tours. Adults were admitted for the small charge of $1.00. The Missouri State Medical Association presented an exhibit entitled "Project M.D." It was designed to show definite action programs of the Missouri State Medical Association to increase the number and distribution of physicians in Missouri. These included: physicians' placement service, medical student loan fund, preceptorship program with Missouri University Medical School, and other close working relationships to secure more physicians for Missouri. This exhibit was manned throughout the fair by medical students from the University of Missouri. The Committee believes that this exhibit was effective and represented a valuable contribution to the purpose of this outstanding health fair.

The Committee feels that one of the most important projects for the State Association and its county medical societies is the development and effective activation of recruitment programs designed to interest qualified young people in medical careers. To strengthen our position on this matter we would like to remind you that the House of Delegates of the AMA at its meeting in Denver, November 27-29, 1961, went on record urging that state and county medical societies continue and expand their recruitment activities designed to interest qualified young people in medical careers and suggesting that they consult with the AMA Council on Medical Education and Hospitals regarding these important activities. The AMA and the Association of American Colleges have launched a major medical career information program for high school, college and community audiences. A kit developed for use in this respect contains information on securing new motion pictures, exhibits, speeches, handbooks and pamphlets. It is recommended that county medical societies make use of these aids, in efforts on the local level, to recruit additional well qualified students for our medical schools.

The Committee does not feel it is necessary to quote statistics in this report showing the decrease in the total number of applicants applying for admission to medical schools during the past decade. Such information has been presented at frequent intervals for the last few years in numerous publications read by physicians. Suffice it to say that reliable sources show the number of applicants for medical schools in this country

A panel on "The Handicapped Child" was presented.

in 1950-1951 to be 22,279, while the number of applicants in the year 1960-1961 had dropped to 14,379.

In addition, it is worthy of note that the percentage of students now accepted into medical school represents a considerable less proportion of "A" students while the proportion of "C" students has remained approximately the same.

The Committee therefore suggests definite studied activities on the part of county medical societies in this state to help solve the problem herein presented.

J. R. McDaniel, Chairman,
C. Howe Eller,
Roy A. Walther,
F. H. Hartwig,
E. A. Belden,
Chester R. Peck,
John P. Mabrey.

The Speaker referred this report to the Reference Committee on Constitution and By-Laws.

(The following supplementary information on the budget and expenditures of this Committee is appended to this report in compliance with a resolution adopted by the 1962 House of Delegates which appears on page 660.)

In support of the 1961 Kansas City Health Fair, the Council authorized $1,500.00 for an Association exhibit.

| | |
|---|---|
| Exhibit—construction, installation and freight | $ 779.58 |
| Exhibit space | 100.00 |
| Color transparency photographs used as part of display | 85.75 |
| Electric installation—Auditorium | 12.75 |
| Exhibit service—Auditorium | 29.07 |
| Transfer charges | 24.00 |
| Exhibit storage | 18.00 |
| Total | $1,174.23 |

The report of the Committee on Constitution and By-Laws, W. A. Bloom, M.D., Fayette, Chairman, follows:

## REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

The Committee on Constitution and By-Laws did not meet in 1961. However, the Council, at its meeting on December 2, 1961, recommended that the annual dues be changed from $35.00 to $50.00.

The additional dues are to provide funds for the Missouri State Medical Foundation. One half of the annual increase is to be allotted for the aims of the Foundation which are to loan money to needy medical students to pay their tuition or other expenses. The remaining half of the increase is to provide additional funds for the day to day increased operating expenses of the Association, particularly in the field of the public service and public policy problems of the medical profession.

An appropriate amendment follows:

Amend, Chapter VIII, Page 8, of the By-Laws, Section 1, line 2, by striking out the figure, $35.00, and inserting in lieu thereof the figure $50.00.

Further amend, Chapter VIII, Page 8, of the By-Laws, Section 2, by adding the following sentence after the period in line 3: "Seven and one half dollars of the annual dues shall be paid annually by the Treasurer to the Missouri State Medical Foundation."

W. A. Bloom, Chairman,
John F. Rutledge,
R. O. Muether,
H. M. Parker.

The Speaker referred this report to the Reference Committee on Amendments to the Constitution and By-Laws.

The report of the Committee on Trauma, Robert E. Funsch, M.D., St. Louis, Chairman, follows:

## REPORT OF THE COMMITTEE ON TRAUMA

The Committee on Trauma presented a panel discussion at the Annual Session of the Association in Kansas City, on March 21, 1961. The subject of the panel was "Out-Patient Injuries." The panelists and subjects were: Dr. J. Vernon Luck, Los Angeles, "Injuries Peculiar to Children"; Dr. Howard J. McAlhany, "Injuries of the Head and Neck"; Dr. Paul W. Meyer, "Injuries of the Knee and Ankle"; Dr. Otis E. James Jr., "Injuries of the Wrist and Hand"; Dr. C. Allen McAfee, "Thermal Injuries to Include Ambulatory Burns and Frostbite." The panel was moderated by Dr. Robert E. Funsch, who also spoke on "Injuries to the Shoulder and Elbow." Each panelist spoke for 10 minutes, following which there was a question and answer period and discussion from the floor.

The Committee on Trauma engaged in some correspondence and preliminary work with reference to motor vehicle injuries and fatalities, in cooperation with a proposed Missouri Automotive Crash Injury Research Program to be patterned after the Pilot Cornell Automotive Crash Injury Research Program. In cooperation with the Missouri State Highway Patrol, it is hoped that this program can be instituted in spot areas in the State of Missouri in the near future. The program centers about the use of seat belts and other safety features and their effect on minimizing or preventing injury as a result of automobile violence.

The Committee endorsed the resolution adopted by the House of Delegates of the Missouri State Medical Association designed to regulate speed in the operation of ambulances and other casualty carrying vehicles, so as to guarantee their compliance with local regulations governing ordinary traffic. The Committee did not endorse a resolution requiring first aid training for ambulance and law enforcement personnel and minimum requirements for the equipment of ambulances. It was felt that legislation along these lines would result in the withdrawal of privately owned ambulances from emergency availability.

The Committee on Trauma made available to the Harvard University School of Public Health a list of all of the agencies and facilities in the State of Missouri currently treating amputees. The Harvard University School of Public Health has undertaken a series of studies pertinent to the driving ability of amputees. The result of this study is not as yet known.

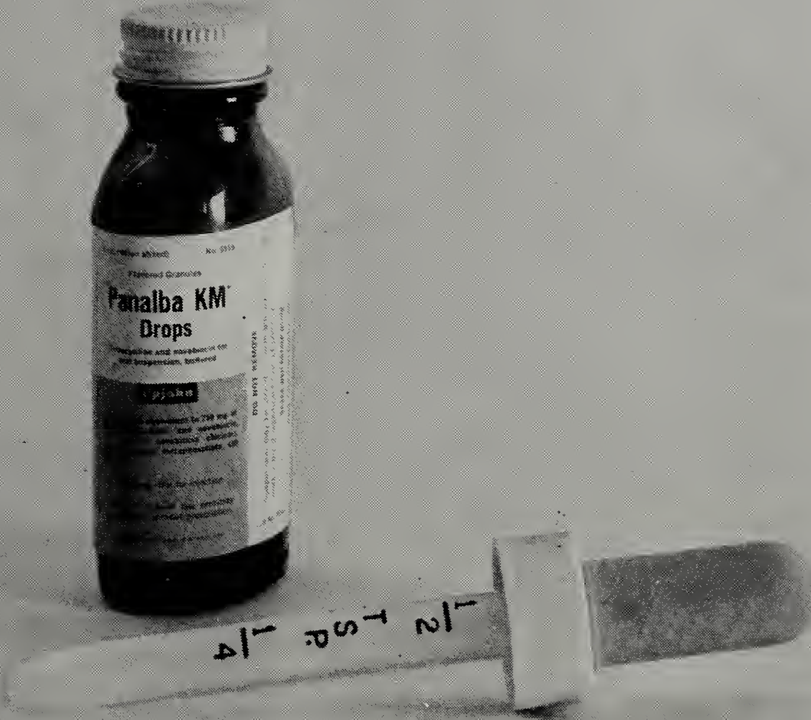
Robert E. Funsch, Chairman,
Paul W. Meyer,
Lee T. Ford,
C. Alan McAfee,
Thomas G. Otto,
Howard J. McAlhany,
Otis E. James,
Grafton A. Smith.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Eye Health, John McLeod, M.D., Kansas City, Chairman, follows:

## REPORT OF THE COMMITTEE ON EYE HEALTH

The Committee on Eye Health met in Jefferson City on November 19, 1961.



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|---|---|
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UNIVERSITY OF

A letter received from the Dean of the University of Missouri School of Medicine regarding eye banks was referred to the Committee by the Council. The Committee obtained information from the American Academy of Ophthalmology and Otolaryngology regarding eye banks, including a Code of Ethics prepared by the Academy.

In October, 1961, the Eye Bank Association of America (a federation of eye banks) was formed and uniform standards and procedures, including a code of ethics, were adopted. The Committee on Eye Banks of the American Academy of Ophthalmology and Otolaryngology will serve as an advisory committee to the Eye-Bank Association.

The Committee on Eye Health recommends that the Missouri State Medical Association should support and endorse the formation of eye banks in the state, wherever and whenever need is demonstrated so long as such eye banks conform with the qualifications and code of ethics required by the Eye Bank Association of America.

At the present time, two eye banks are in operation in Missouri which meet the standards referred to. These are: the Eye Bank of St. Louis, located at the Washington University School of Medicine, and the Eye Bank at the University of Missouri School of Medicine, Columbia.

Optometric legislation was discussed.

John McLeod, Chairman,
Michael F. Pernoud,
H. B. Ivy,
H. B. Stauffer,
Paul G. Wolff,
Dick H. Underwood,
Paul M. Beck,
D. E. Eggleston,
W. L. Post,
Robert S. Minton,
Vernon G. Jackson.

The report was submitted to the Council at its meeting on December 2, 1961 (page 613, Report of the Council), with the understanding that neither the Committee nor the Council was requesting that the Code of Ethics of the Eye Bank Association of America be approved at this time.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Industrial Health, H. M. Roebber, M.D., Bonne Terre, Chairman, follows:

## REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

Nothing was presented to the Committee on Industrial Health during the past year for discussion or action. Consequently, the Committee was not called together for any meeting during that time and has nothing to report.

H. M. Roebber, Chairman,
Vencel W. Hollo,
William H. Duncan,
S. W. Scorse,
Douglas A. Ries,
James W. Clawson,
C. Rush McAdam,
Richard A. Sutter.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Diabetes, H. E. Oppenheimer, M.D., St. Louis, Chairman, follows:

## REPORT OF THE COMMITTEE ON DIABETES

The Missouri State Diabetes Association, which grew out of this Committee on Diabetes, had an active year. This organization, along with the Committee on Diabetes, sponsored Dr. Robert Hardin, Iowa City, as its speaker at the Missouri State Medical Association annual meeting in March 1961. Dr. Hardin spoke on "The Natural History of Juvenile and Adult Onset Diabetes." He also addressed the Missouri State Diabetes Association and the Committee on Diabetes on "Convulsive Disorders in Juvenile Diabetes."

The Missouri State Diabetes Association sponsored a detection drive in Sullivan, Missouri. Over 70 diabetic persons were discovered out of 3,500 specimens submitted; 3,500 specimens represented 85 per cent of the town's population. This house to house canvass was carried out in cooperation with the local physicians and medical society and the Missouri State Division of Health.

At a fall meeting of the Missouri State Diabetes Association, Dr. Harold Roberts, Chairman of the Committee on Detection, Dr. Crawford of Sullivan, and Dr. Allen of the Missouri State Division of Health, reported on their findings.

The Missouri State Diabetes Association is to sponsor Dr. Henry T. Ricketts at the forthcoming annual meeting of the Missouri State Medical Association in March 1962. Dr. Ricketts is Professor of Medicine at the University of Chicago.

Audiences at scientific sessions were attentive.

The St. Louis Diabetes Association had an active year. A dinner for diabetic persons was held in April 1961 and was attended by 300 individuals. Following this a question and answer period was carried out as well as a demonstration of diets by the dieticians of a local commercial concern.

In November 1961 a panel on "Cholesterol" was given. The participants were Dr. George L. Curran, Professor of Preventive Medicine at St. Louis University; Dr. William Olmsted, Executive Director of the St. Louis Diabetes Association; Dr. John Hammond, Assistant Professor of Medicine, St. Louis University, and Dr. Paul Bettonville, Assistant Professor of Clinical Medicine, St. Louis University.

A successful Camp for Diabetic Children was held at Lions Den and was attended by approximately 50 individuals.

The fourteenth annual Detection Drive was carried out and resulted in detection of several hundred diabetic persons. In 14 years, more than 3,000 undiscovered diabetic persons have been found.

Similar programs and detection campaigns were carried out by the Kansas City Diabetes Association.

The St. Louis Medical Society, the St. Louis Academy of General Practice and the St. Louis Clinical Diabetes Society cooperated in a Fall Postgraduate Course on Diabetes. Twelve one hour lectures and a panel discussion formed the course which was attended by approximately 30 individuals.

The American Diabetes Association is strongly represented in Missouri. Many members of the local and state societies belong to the A.D.A. and each meeting of the parent organization is attended by many of these local members. Dr. Robert E. Fox, Dr. Sidney Goldenberg, Dr. W. H. Olmsted, Dr. H. E. Oppenheimer, Dr. Harold K. Roberts are members of committees of the A.D.A.

Dr. Harold K. Roberts was appointed State Governor for Missouri of the A.D.A., succeeding Dr. H. E. Oppenheimer, a Councilor of the A.D.A.

Dr. Sidney Goldenberg participated in the Tenth Annual Postgraduate Course of the A.D.A. in Detroit, Michigan, in January 1962 speaking on "Specificity of Vascular Lesions in Diabetes."

The American Diabetes Association, in an attempt to further its educational program to the physician, has developed a "check-list" of nine basic elements of treatment which it desires to disseminate to all physicians in the country. These are as follow: (1) diet, (2) urine testing, (3) action of insulin and other hypoglycemic agents, (4) technic of insulin injection and sites for it, (5) care of syringe and of insulin, (6) symptoms of hypoglycemia, (7) symptoms of uncontrolled diabetes, (8) care of the feet, (9) what to do in case of acute complications.

Henry E. Oppenheimer, Chairman,
G. Bruce Lemon,
H. M. Gilkey,
Lucien W. Ide,
Charles M. Lamke,
W. H. Olmsted,
Robert E. Koch,
Ralph S. Casford,
Thomas W. Burns.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Hospital and Professional Relations, Ralph Perry, M.D., Kansas City, Chairman, follows:

## REPORT OF THE COMMITTEE ON HOSPITAL AND PROFESSIONAL RELATIONS

Nothing was referred to the Committee on Hospital and Professional Relations during the last year and, consequently, the Committee has not met during that time and has nothing to report.

Ralph Perry, Chairman,
Hollis N. Allen,
Walter S. Sewell,
Victor B. Buhler,
Stanley S. Peterson,
W. F. Francka,
Willard Bartlett.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Physical Medicine and Rehabilitation, D. Elliott O'Reilly, M.D., St. Louis, Chairman, follows:

## REPORT OF THE COMMITTEE ON PHYSICAL MEDICINE AND REHABILITATION

The Committee did not meet during 1961. However, the Chairman and other members carefully considered the legislation, S.B. 146, proposed by the physical therapy group in order to obtain licensure. S.B. 146 did not conform in several particulars with suggestions offered by the Committee in 1960 to a representative of the physical therapy group. As a result, amendments were offered at a Committee hearing in the Senate by a representative of the Association.

Several of the amendments were accepted by the Senate. Though S.B. 146 did not pass in the final days of the legislative session, the amended version more nearly met the recommendations of the Committee than the original drafts.

The Committee will continue to cooperate with representatives of the physical therapy group in order to secure the passage of acceptable licensure requirements for physical therapists.

D. Elliott O'Reilly, Chairman,
F. O. Tietjen,
F. D. Sundstrom,
William J. Stewart,
Robert H. Fitzgerald,
Otakar Machek,
Edward B. Shires.

The Speaker referred this report to the Reference Committee on Miscellaneous Affairs.

The report of the Committee on Civil Defense Disaster Medical Care, Carl D. Siegel, M.D., Sedalia, Chairman follows:

## REPORT OF THE COMMITTEE ON CIVIL DEFENSE DISASTER MEDICAL CARE

On November 19, 1961, the Committee met at Hotel Missouri, Jefferson City, with Carl D. Siegel, M.D., Chairman, presiding. Present were Drs. C. D. Siegel; H. B. Steinbeck, Union; Carrol P. Hungate, Kansas City; John L. Mothershead, St. Joseph; George L. Watkins, Farmington; W. C. Allen, Jefferson City; Miss Helen Penn and Messrs. Jordan Singleton and Thomas P. Fox, St. Louis. Absent were Drs. M. P. Leech, Fayette; John H. Walterscheid, Hannibal; Curtis H. Lohr, Clayton; R. Ned White, Springfield; George E. Thoma, St. Louis; O. P. Hampton, University City.

Minutes of the previous meeting of November 20, 1960, were discussed and it was stated that the Governor's Civil Defense Advisory Committee had held their first meeting. The second meeting scheduled for a half-day prior to the 1961 Annual Session was cancelled due to lack of time for preparation. The Council voted to consider committee expenses, as incurred, rather than to provide a budget. The Model Emergency Hospital was displayed at the last Annual Session. A meeting was suggested to formulate a uniform Medical Civil Defense plan as was being considered by the Division of Health; also that contact with other professional groups, suggested by the Committee, was being made by the Division of Health.

Denver Meeting: The Committee Chairman reported on a Civil Defense Institute attended in Denver on September 16. He said that various states reported on their work and that the over-all planning in Missouri was in line with other states. He said that some states had begun stockpiling of drugs and other supplies and suggested that Missouri begin such work. There are now 68 Civil Defense hospitals in the state, some of them stored where there is insufficient personnel for manning.

Civil Defense Conference: Committee Chairman reported attending the 12th annual County Society AMA Civil Defense Conference in Chicago on November 4 and 5. He said it was a practical meeting and that a report of the meeting will be published in *J.A.M.A.* later. He pointed out that the Division of Health was responsible for a state medical survival plan and that a framework had been set up but that personnel was lacking.

Action: On motion of Dr. Hungate, seconded by Dr. Watkins, it was voted that it be recommended to the Council that Missouri physicians assume the responsibility of medical care in natural or wartime disasters, under the framework of the Division of Health.

**A panel on "Recent Developments in Infectious Diseases" was presented.**

Advisory Committee: The Governor's Advisory Committee was discussed and it was pointed out that recommendations must go through the Governor, and that medical members of the Committee must be guided by the MSMA Committee.

Lay Personnel: It was reported that in some states, the phrasing of the Civil Defense law was such that malpractice could not enter into the training of lay personnel for Civil Defense work. It was decided that this should be checked further and that possible changes in the Missouri law might be recommended. Dr. Siegel will inquire further in Battle Creek, December 5.

The following were discussed: (1) The recommendation of shelters, (2) the need to promote immunization prior to disaster, (3) the need to allay public panic without incurring apathy, (4) need for publicity on the self help program, (5) the need for a manpower inventory and information on pharmacy inventories, (6) the need for stockpiling of chemicals for purification of water and (7) other public health measures.

Los Angeles Conference: Dr. Watkins reported briefly on the Civil Defense Program in Los Angeles in November, saying the highlights were a talk on possibilities of attack and survival, Pfizer awards for Civil Defense work, report of hearing of the Hollifield committee, the wide range of radiation discussions. He said that bacterial and chemical warfare was not discussed as it had been covered in other conferences. It was asked that, when copies were available, Hollifield committee hearings be obtained and furnished members.

Vote of Thanks: On motion of Dr. Hungate, seconded by Dr. Watkins, it was voted to express thanks to the Council and to the Division of Health for the support the Committee had continuously received.

Civil Defense Meeting at M.U.: Dr. Siegel said that he would confer soon with Dean Wilson of the University of Missouri School of Medicine concerning a postgraduate educational meeting on Civil Defense, similar to the one held on April 6, 1961, and attempt to have this an annual conference.

Role of Physician: It was pointed out that the role of the physician in Civil Defense was set out in an AMA manual.

### ACTIVITIES SUBSEQUENT TO COMMITTEE MEETING

Workshop on Medical Self-help given by the U. S. Public Health Service at Battle Creek, Michigan, December 4-7, 1961: The Committee Chairman reported this meeting was attended by approximately 100 people from the central one third of the United States representing the medical profession, the Divisions of Health, the Departments of Education, and the Civil Defense Departments of the various states.

The history of this program was presented along with a review of the background which makes such a program an effective part of any civil defense effort.

Missouri was fortunate in having three physicians attending: Dr. Ross, from the University representing the MEND Program of the Medical School; Dr. Sanders, to represent the Cole County Medical Society; and Committee Chairman, representing the Medical Association and the Division of Health. The State of Missouri will have 97 teaching kits, each capable of teaching 125 people, maximum. The kit is equipped with material for teaching of 100 people and a reorder capability of only 25 per cent. This is all of the material that is made up at the present time. The goal of the U. S. Public Health Service, at the present time, is to train a person in each of 300,000 families by the end of the fiscal year, 1962. It was the general consensus of opinion of this entire group that maximum usage could be obtained from each of these kits, therefore, insuring Missouri's quota of the over-all projected figure.

It has been discussed with Dr. Hardwicke and members of the Civil Defense Agency in the state and it is believed that the best way to get the kits down to the grass roots is that distribution be made by the District Health Officer of the five District Offices throughout the state. It is felt that better control can be kept on the kits by making distribution in this manner.

Carl D. Siegel, Chairman,
M. P. Leech,
H. D. Steinbeck,
Carroll P. Hungate,
John L. Mothershead,
John H. Walterscheid,
Curtis H. Lohr,
R. Ned White,
George L. Watkins,
George E. Thoma,
O. P. Hampton.

The report of the meeting was presented to the Council on December 2. The Council voted to accept the report but that in lieu of recommendation under "Action" ask that the Committee be requested to work with Dr. Hardwicke on a program of medical care aspects and to report back to the Council as early as possible. (Page 614, Report of the Council).

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Radiology and Ionizing Radiation, Wendell G. Scott, M.D., St. Louis, Chairman, follows:

## REPORT OF THE COMMITTEE ON RADIOLOGY AND IONIZING RADIATION

Two bills were presented to the state Legislature during the last session. These were bills No. 61 and No. 62, both concerning the creation of a Committee on Radiation Control as a Committee of the Missouri State Atomic Enegry Commission. Neither of these bills passed the Legislature and have been returned to the Committee for revision.

The opposition to these two bills was primarily from the Department of Agriculture and a compromise is to be presented at the next sesion of the Legislature to compose two separate bills—one concerning agriculture and the second concerning the control of radiation in regard to public health.

The members of the Missouri State Medical Association are urged to contact their respective legislators asking them to act in favor of this double bill so that the Public Health section will be under the control of the Missouri State Division of Health and not under the control of the Department of Agriculture. Dr. H. M. Hardwicke, Director, State Division of Health, urges the active support for the passage of this bill.

Bill No. 133 which had to do with including training in the diagnosis and the use of x-rays in the curriculum of the chiropractor was not passed by the last session of the Legislature. This has been an important decision.

The Committee on Radiation of the St. Louis Medical Society is in the process of instituting a city wide volunteer survey of all fluoroscopes and radiographic equipment to see that they conform to the standards of safety as recommended by the National Committee on Radiation Protection and as written in the Handbook by the U. S. Bureau of Standards. It is hoped that after this initial survey has been completed and experience has been gained from it, that a similar program can be instituted throughout the State of Missouri. At the present time, the Missouri State Division of Health does not have sufficient personnel to undertake such a study.

WENDELL G. SCOTT, Chairman,
MILTON SHOSS,
ARTHUR B. SMITH,
MARVIN L. NAPPER,
MARK D. EAGLETON.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Tuberculosis, Florence E. MacInnins, M.D., Kansas City, Chairman, follows:

## REPORT OF THE COMMITTEE ON TUBERCULOSIS

The Committee on Tuberculosis met in Jefferson City on October 1 with representatives of the Missouri Tuberculosis Association and the Missouri Division of Health. Two important matters were considered on this occasion; namely, a new law in Missouri effective October 13, 1961, relating to compulsory isolation of recalcitrant tuberculosis patients and policies of the Missouri Division of Health relative to their distribution of tuberculosis drugs for treatment.

The new law was gone over carefully at this meeting with a full discussion of the difficulties involved in carrying out the law at the present time. The Committee was brought up-to-date by the Division of Health on present policies which are being followed in providing drugs for tuberculosis patients. Suggestions and recommendations were solicited by the Division of Health from those present which might lead to a better way of handling the drug program.

The full report of the Committee's meeting appears in the Council Report to the House of Delegates under data of its meeting December 2-3, 1961 (Page 619, Report of the Council).

FLORENCE E. MACINNIS, Chairman,
PAUL MURPHY,
H. M. ROBERTS,
JOSEPH L. LUCIDO,
WALTER C. GRAY,
DAVID N. KERR,
JOHN W. POLK,
CARL G. POPP,
JUDSON I. CHALKLEY.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Rural Medical Service, Jack Mullen, M.D., Bonne Terre, Chairman, follows:

## REPORT OF THE COMMITTEE ON RURAL MEDICAL SERVICE

The Committee has continued its efforts to place more physicians in rural Missouri during the last year. An up-to-date listing of opportunities for physicians seeking locations, both generalists and specialists, is kept on file in the State Association office, supervised by the Field Secretary. Those physicians who contact the office for location information are given a listing of locations and in most cases additional information through a personal letter.

During the last year more than 30 physicians have located in non-metropolitan areas of the state and 10 of these are graduates of the University of Missouri Medical School. During the last few years, four rural Missouri communities, with suggestions and architectural assistance from Sears Roebuck Foundation, have built doctors' offices in their respective communities. These towns are Illmo, Clarksville, Pattonsburg and Schell City. Local funds only have been used to construct these offices. The first three towns listed, following completion of the offices, have secured a physician to take over the office. Other communities over the state are willing to assist a

Drs. Shull, Andrews, Dowell and Hodge hold impromptu conference.

physician in locating in their respective communities. The building of new hospitals and additions to older ones throughout the state are helping to attract physicians to those particular areas. On May 11, 1961, during the Annual Spring Clinical Conference held at the University of Missouri Medical Center, the Committee in cooperation with the Missouri Academy of General Practice sponsored a luncheon meeting at the Medical Center for the senior medical students of the University of Missouri. Following the luncheon, discussions were given on solo practice, partnership practice and a small group practice in localities in out-state Missouri. Dr. J. H. Summers, President of the Missouri State Medical Association, and Dr. Cecil G. Leitch, President of the Missouri Academy of General Practice, spoke at the session along with Dr. B. J. Bass, Salem; Dr. Charles A. Worley, Sweet Springs; and Dr. A. E. Spelman, Smithville.

Following the formal presentations, a question and answer period was held. The Moderator for the entire session was Dr. E. D. Imes of Maryville. It is felt that this luncheon session was well worth while and with an expanded program may well be established as an annual affair, possibly to be held in the fall of the year.

With the assistance of the Council on Rural Health of the AMA, the Committee is furnishing a health column service to *Missouri Ruralist,* which goes to farm families in every section of the State of Missouri. This is a widely read farm publication and the Committee is pleased to contribute health education articles for its readers consumption.

This Committee is pleased to note that a number of county medical societies are now holding programs on "Athletic Injuries" where high school coaches and the doctors get together for a program of mutual interest.

In addition, the Committee feels that good results are being obtained by those societies who are holding joint meetings with lawyers, dentists, pharmacists and other professional groups throughout rural Missouri.

Jack Mullen, Chairman,
Fred L. Wommack,
James H. Sweiger,
K. S. Latham,
Charles A. Worley,
B. J. Bass,
John F. Pearl,
James E. Campbell.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on the American Medical Education Foundation, James P. Murphy, M.D., St. Louis, Chairman, follows:

## REPORT OF THE COMMITTEE ON THE AMERICAN MEDICAL EDUCATION FOUNDATION

Since contribution totals for Missouri's AMEF drive for 1961 are not as yet available from the American Medical Education Foundation, final figures for the year will be issued as a supplement to this report at the 1962 Annual Session.

A significant development during the past year was the announcement issued by the AMA stating that, effective January 1, 1962, the AMEF program would be merged with that of the American Medical Research Foundation. The latter, a financial grant program organized in 1957 by the AMA to encourage medical research in American universities, has—like AMEF—relied on private gifts for its operation.

The newly consolidated programs, to be known as "The AMA Education and Research Foundation," will function in much the same manner as has AMEF since 1951. The new Foundation's objectives, however, have been greatly expanded. Funds secured from physicians, medical societies, the Woman's Auxiliary—as well as private business and philanthropic sources—will be used to:

- make unrestricted grants to medical schools.
- provide education loans to medical students.
- furnish medical scholarships.
- establish a medical journalism fellowship program.
- supply research grants to medical research workers.
- finance a study of perinatal mortality and morbidity.
- conduct a study of continuing medical education.

Contributors to AMA-ERF will be able to designate which project they wish their gifts to support. And, in the case of donations earmarked for financial assistance to medical schools, the donor may designate the specific school that is to receive his contribution.

The MSMA Committee for AMEF urges all members of the Association to support generously the new Foundation's fund-raising efforts in 1962—and in years to come. It is anticipated that the new and broadened educational grant program will necessitate certain changes in the State Association's annual fund-raising campaign in behalf of medical education ("Missouri AMEF Month").

In keeping with the practice of previous AMEF reports, the Committee is pleased to give the following final tabulations on AMEF activities for 1960 (the most recent year for which complete results are available):

Total contributions to AMEF by physicians and the Auxiliary amounted to $11,512—a new all-time high for the state, although just $77 more than was contributed in 1959.

The Woman's Auxiliary donated $3,852 in 1960, also a new high.

Over-all contributions to medical education by Missouri physicians (including both AMEF gifts and those sent direct to medical schools) rose from $78,471 in 1959 to $107,761 in 1960, a 27 per cent increase.

AMEF grants to Missouri medical schools in 1960 totaled $39,106. Of this amount, St. Louis University received $16,556, the University of Missouri, $7,411, and Washington University $15,139.

Of Missouri's approximately 3,800 physicians, 1,490 donated funds to medical education in 1960.

James P. Murphy, Chairman,
Allen I. Herman,
Glenn L. McElroy,
William T. McNew,
Russell D. Sheldon.

## SUPPLEMENTAL REPORT OF THE COMMITTEE ON AMEF

Mr. Speaker, Members of the House of Delegates:

Our Committee for the American Medical Education Foundation has furnished the bulk of its annual report to this body and the MSMA membership on pages 35 and 36 of the pamphlet entitled "Reports of Officers and Committees."

The Committee wishes to supplement the printed report, however, by giving you at this time a tabulation of AMEF figures for the year 1961—gratifying figures which we received from the AMA too late for inclusion in our original report. These figures, incidentally all relate to gifts to the Foundation, and do not include contributions by Missouri physicians direct to medical schools.

As Dr. Dowell noted in his address, last year marked a new all-time high in contributions to our Missouri AMEF program. Total 1961 contributions amounted to

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Dr. Jeans presents plaque to Dr. Lewis at University of Missouri Alumni luncheon.

$14,884—a 29 per cent increase over the previous high, set in 1960.

Of this amount, physicians donated $12,209 and the Woman's Auxiliary contributed the remaining $2,675. Perhaps the most significant point to be brought out in this respect is that, aside from the Auxiliary's customary good job in raising funds for AMEF, we physicians last year gave almost $4,600 more to the Foundation than during the previous year.

In large part this was the result of increased participation by Missouri doctors in the AMEF campaign. In 1960, for example, only 210 physicians and societies contributed, but in 1961 this figure more than doubled as 461 mailed checks to the Foundation.

On February 26, 1962, AMEF checks covering contributions received during the year 1961 were distributed by this Committee to the deans of Missouri's three medical schools at special luncheon ceremonies held in St. Louis. Total amount of these gifts was $31,733, of which the University of Missouri received $6,996, St. Louis University $12,051, and Washington University $12,686.

On a nationwide basis, AMEF contributions for the last year totaled $1,303,161, the largest amount ever subscribed to the Foundation's activities in a single year.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Laboratory Medicine, Angelo Lapi, M.D., Kansas City, Chairman, follows:

## REPORT OF THE COMMITTEE ON LABORATORY MEDICINE

The Committee on Laboratory Medicine held three meetings, all of which were attended by the legal advisor of the Association. The Committee revised House Bill 339 of February 28, 1955, in a form considered suitable for introduction into the 1963 legislature.

The Committee hopes to enlist the support of the various bar associations of Missouri in this regard.

The Committee approves the recommendation of the Committee on Control of Venereal Disease having to do with the reporting of serology tests to the State Division of Health by patient's name rather than by number.

Angelo Lapi, Chairman,
Eugene F. Tucker,
Fred C. Coller,
Hollis N. Allen,
T. J. Cooper.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Council, Kenneth C Hollweg, M.D., Kansas City, Chairman, follows:

## THE COUNCIL

### Meeting of March 22, 1961

The Council met at Hotel Muehlebach, Kansas City, March 22, 1961, with J. H. Summers, M.D., Lebanon, President, presiding. Those present were Drs. Summers; Joseph L. Fisher, St. Joseph; Leonard T. Furlow, St. Louis; Paul R. Whitener, St. Louis; A. P. Rowlette, Moberly; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Kenneth C. Hollweg, Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Donald M. Dowell, Chillicothe; R. O. Muether, St. Louis; John A. Griffith, Kansas City; Messrs. Lemoine Skinner, Gene Lunn, Jordan Singleton, Ray McIntyre, T. R. O'Brien, and Helen Penn, St. Louis.

#### NEW COUNCILORS

New Councilors were introduced: Dr. A. P. Rowlette, Moberly, Second District; Doyle C. McCraw, Bolivar, Eighth District; W. D. English, Cardwell, Tenth District.

#### DR. DOWELL RESIGNATION

Dr. Dowell resigned as Councilor of the First Councilor District, and on motion, duly seconded, Dr. Joseph L. Fisher, St. Joseph, was named as Councilor until the next Annual Session. It was pointed out that Dr. E. A. Stricker, St. James, had been appointed a year ago to serve until the next Annual Session and that the delegates from the Ninth Councilor District elected him to complete the two year term.

#### CHAIRMAN

On motion of Dr. Furlow, duly seconded, Dr. Hollweg was elected Chairman of the Council. Dr. Hollweg took the chair and conducted the remainder of the meeting.

#### VICE CHAIRMAN

On motion of Dr. Dowell, duly seconded, Dr. Stuart was elected Vice Chairman of the Council.

#### OFFICERS

On motions, duly seconded, the following officers were elected: Secretary, John I. Matthews, M.D., Jefferson City; Treasurer, Charles R. Doyle, M.D., St. Louis.

#### MEDICAL TECHNOLOGISTS

Mr. O'Brien said that he had had a request through the Committee on Laboratory Medicine that the Missouri Society of Pathologists and the Missouri Society of Medical Technologists have a joint scholarship fund and that they be allowed to use the Association address as a mailing address. On motion of Dr. Stuart, duly seconded, this was approved.

#### PUBLIC SERVICE FUND

It was pointed out that in view of the action of the House of Delegates directing the implementation of the Kerr-Mills and continuation of a public service project there would be need for more monies than had been delegated for this type of work. With the understanding that the Council would be consulted before any large expenditures were made, on motion of Dr. Dowell, duly seconded, it was voted that up to $25,000 be used for this purpose if necessary.

### KERR-MILLS IMPLEMENTATION

The implementation of the Kerr-Mills Bill was discussed including the question of whether a resolution should be presented to the legislature or if a bill should be introduced. The consensus of opinion was that a bill should be prepared and introduced.

### NEXT MEETING

After discussion of possible time for the next meeting, which Dr. Dowell wished to have in Chillicothe, it was left to Dr. Dowell, Dr. Hollweg, and Mr. O'Brien to arrange a place and date.

## Meeting of May 20-21, 1961

The Council met at Hotel Chase, St. Louis, on May 20-21, 1961, with Kenneth C. Hollweg, M.D., Kansas City, Chairman, presiding. Those present were Drs. Hollweg; Joseph L. Fisher, St. Joseph; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Doyle C. McGraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; J. H. Summers, Lebanon; Donald M. Dowell, Chillicothe; John I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; H. M. Hardwicke, Jefferson City; Messrs. W. H. Bartleson, Kansas City; Hollister Smith, St. Louis; John Buckner, Springfield; Lemoine Skinner, Jordan Singleton, Ray McIntyre, T. R. O'Brien, and Helen Penn, St. Louis. Attending part of the meeting were Dr. Vernon E. Wilson, Columbia; Mr. Frank Woolley, Chicago; Edgar Mothershead, St. Louis; Gene Lunn and William Brennan, St. Louis.

Minutes of the meetings of the Council on March 19 and March 22, on motion duly seconded, were approved.

### COMMITTEE REFERRALS

Mr. O'Brien referred to resolutions introduced in the House of Delegates, one, pertaining to maternal mortality studies, was referred to the Committee on Maternal Welfare; a resolution on corporate practice and hospital accreditation was referred to the Committee on Corporate Practice; a resolution on Public Service, to be referred to a commitee on Public Service to be appointed, and two resolutions regarding traumatic accidents were referred to the Committee on Trauma.

### EXHIBITS

Mr. O'Brien presented a report from the Medical Exhibitors Association on the Kansas City session which showed that the exhibitors had been, in the main, pleased with the session.

### HEALTH FAIR

It was reported that expenditure for the exhibit at the Health Fair in Kansas City had remained within the stipulated amount.

### FIELD SECRETARY'S REPORT

Mr. McIntyre reported several recent meetings in the state, among them a meeting in St. Joseph on May 1 with dentists meeting with the Buchanan County Medical Society with Congressman Hull as speaker; the Ozark Cancer Conference in Springfield on April 28, and the Greene County Medical Society as guests of the dental society on April 19 and of the bar association on May 26; the Spring Clinical Conference on May 11 and 12 in Columbia; Jasper County Medical Society having the bar association as guests on April 11; the Grand River Medical Society having Mr. Frank Woolley of the AMA as a guest on May 11; a program on "Space Medicine" at the Whiteman Air Force Base on May 17. He listed coming meetings as Grand River Medical Society meeting and golf tournament, with Dr. Vernon E. Wilson, Columbia, as speaker on June 8; The West Central Medical Society having dentists and lawyers as guests on June 8 with Lt. Gov. Hilary Bush as speaker; a Missouri Academy of General Practice meeting on medical economics at Arrowhead Lodge, Lake of the Ozarks, on July 30; Jackson County Medical Society to have Mr. Woolley as speaker on May 23.

The Council met periodically during the year.

Mr. McIntyre reported that of the 62 graduates of the University of Missouri this year, 25 will intern in Missouri. He said that 13 seniors had elected the preceptor program this year and that 24 of 65 students have elected to take the preceptor program next year. Of last year's class nine intend going into practice in Missouri. He reported a luncheon meeting for senior students held during the Spring Clinical Conference in Columbia when a panel program on solo, partnership and group practices was presented.

### CRIPPLED CHILDREN'S SERVICE

Dr. Wilson discussed the situation of the Crippled Children's Service, saying that it has been broadened to include other types of care than orthopedic cases and that the Board of Curators feels that in some cases pediatricians should be used as consultants in addition to the surgeons. Further consideration will be given to this question at the next meeting of the Council.

### EYE BANK

Dr. Wilson gave the history of the Lions Club of Missouri working in cooperation with the University of Missouri in setting up an eye bank at Columbia. He said there had been some difficulty of cooperation with other eye banks, but that problems seemed to be working out.

The Committee on Eye Health is studying the eye bank situation and will report to the Council at a later date.

### LEGISLATION

Mr. O'Brien presented information on legislation affecting the practice of medicine. He discussed the following bills: H.B. 133, H.B. 157, H.B. 35, S.B. 77, S.B. 146, S.B. 82, H.B. 107, H.B. 106, H.B. 105, S.B. 359, H.B. 498, H.B. 182, H.B. 633, H.B. 690.

### KERR-MILLS H.B. 690 AND 633

The possibility of passage of either H.B. 690 or 633, in their present forms, was discussed and the consensus of opinion was that with the state searching for more revenue, that full implementation was not possible. It was suggested that a House Committee Substitute for House Bills 690 and 633 which will provide for minimal implementation might be more acceptable to the legislature.

Following discussion, on motion of Dr. Stuart, duly seconded, Mr. O'Brien was given authority to offer the substitute bill as a compromise.

### ST. LOUIS COUNTY PLAN

Dr. Whitener reviewed the St. Louis County Medical Society plan for reduced fee service to senior citizens. He said the plan, in which practically all members are cooperating, provides for reductions in fees ranging from 10 to 90 per cent. With a population in the county of three quarters of a million people, with 50,000 estimated to be over 65 years of age, there have been only 60 people who have applied for the cards entitling them to reduced fees. His conclusion was that doctors had already been providing reduced fees for lower income patients, that the community is a relatively high-income area, and that older people there are more self-supporting and in better health than some politicians would have the public believe.

### TRIPLE POINT PROGRAM

The following suggested triple point program was presented: An essential and urgent plan for—

1. Implementation of the Kerr-Mills Law in Missouri.
2. Effective opposition to King-Anderson legislation in Congress.
3. Institution of local action programs in each county society, supported by projects on the MSMA level, to provide the real and long-term solutions to problems of health care of the people.

Three programs aimed at the accomplishment of a single objective—to solve any existing problems of the financing of health care without the interference of a compulsory Federal system of socialized medicine.

### MOBILIZATION—GENERAL

* 1. Letter to local societies reporting House of Delegates actions on Kerr-Mills and King-Anderson among other actions taken.

* 2. Letter to societies outlining plans and requesting appointment of local committees in all societies which have not yet acted (see Kerr-Mills No. 5).

* 3. Letter to Auxiliary President outlining plans (see Kerr-Mills No. 6).

* 4. Appointment of Mr. William J. Brennan as Program Coordinator. (Mr. Brennan will be on temporary loan from his position as Professional Relations Representative at St. Louis Blue Shield.) As program coordinator, his principal activities will be in the field of local medical society contacts to provide assistance and advice in carrying out the program.

5. Continuing follow-up through letters, personal visits, etc., to organize societies and make sure jobs are done and enthusiasm is kept high.

### KERR-MILLS IMPLEMENTATION

* 1. Draft and introduce legislation required (H.B. 690) (by April 4—session ends June 30).

* 2. Statewide release on introduction of bill—enclose résumé of law from AMA Legislative Digest—enclose five reasons why.

* 3. Letter to Council and Committees on Aging and Medical Economics—enclose release—cover other bill submitted on Kerr-Mills, etc.

*4. Letter to membership on bill—enclose five reasons why and analysis of H.B. 690—urge support and letter writing.

* 5. Letter to local society presidents—urge appointment of committee, active support by society members, contacts with other organizations.

* 6. Letter to Auxiliary President similar to that to local society presidents. Urge similar organization; determine method of handling communications.

** 7. Distribute "Health Care for Aged" kits to societies.

8. Letter No. 2 to membership, later in session—write now.

9. Other items to be developed as legislation progresses through General Assembly—testimony for hearings, statements for committees, additional news releases, letters to membership as needed, etc. This may include an entire new program dealing with appropriations for Kerr-Mills.

10. After bills are passed, another publicity and information program will have to be developed to explain the details of implementation worked out by the Division of Welfare, etc.

### KING-ANDERSON

* 1. Send resolution of MSMA House to President of U. S. and Missouri Federal legislators.

** 2. Distribute kit for editorial writers—both managing and editorial page editors on major papers—with letter from MSMA explaining situation in Missouri, analysis of H.B. 690.

3. Distribute kit "Medical Care for the Aged" to local medical societies urging them to use materials in whatever way they can. (Communications Kit.)

A panel on "What's New" was a part of the program.

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* Items so marked have been completed, as of May 5, 1961.
** Materials ordered from AMA.

4. Organize local committees through the Public Service Committees of local societies to work to oppose King-Anderson—include druggists, nurses, dentists, etc. Through this try to set up and promote speakers bureaus, distribution of literature, etc. (Build on Kerr-Mills organization.)

5. Letter to membership briefing King-Anderson bills, explaining dangers, urging physicians to talk to patients and friends, write letters to Congress.

6. Similar letter to Auxiliary.

7. Consider mailing of booklet—"Helping Those Who Need Help"—to key opinion leaders throughout state—if possible, through local society committees furnishing lists and enclosing cards.

** 8. Cooperation and coordination of "Operation Coffee Cup"—National Woman's Auxiliary project to secure letter writing by friends through coffee parties. Provide additional literature on King-Anderson bill and materials on Kerr-Mills implementation in Missouri.

9. Consider letter to membership each month or every other month with some late news, folders, talking points that physicians can use in arguing against Social Security approach. For example—fact that Socialist Party has come out for King-Anderson and assured its members that it is socialized medicine.

10. Continuing work with local committees to promote such things as distribution of literature through doctors' offices, discussions with pinpointed audiences, such as ministers and nurses who seem to tend, on a national level, to favor King-Anderson. This would be a constant effort to involve every physician in the state personally.

11. Other items to be developed as the bills proceed through Congress, hearings are set and held, etc.

12. Development of system of local news releases—not on theme that physicians oppose K-A, which is hardly news—but taking advantage of every opportunity to present the fact of opposition and the reasons for it. In cooperation with local societies, this should include releases whenever a physician speaks to an audience on the subject, committees are formed, etc.

### LOCAL ACTION PROGRAMS

1. Directory of Health Resources—Completion of surveys, assembly of information, analysis of resources and needs, publication of directory. This project is certain to involve a considerable amount of rechecking, obtaining of additional information, etc., along with state level staff work to obtain information on statewide organizations.

2. After analysis of both resources survey results and case studies made last year, work with local committees to develop project to solve most pressing local need. Ideally, each local society should have some project under way, involving not only the society, but other groups in the community. This may be to obtain a county physician, build a nursing home, set up a homemakers service—anything which involves health care and the aged. Fifty-two simultaneous campaigns led by physicians to solve concrete problems would have tremendous impact on the public. Each local project would, of course, require coordination and assistance with planning, publicity, legislative matters, campaigning, etc.

3. Continue and increase the heightened publicity activity begun in 1960. (AMEF, student loans, student awards, preceptorships, etc.)

4. Student Loan Fund—active campaign to secure individual and society contributions, in addition to publicizing results, loans made, etc.

5. Student recruiting—promotion of activities locally and statewide, to recruit students to medical and paramedical careers.

6. An active campaign to secure more support and promotion of Blue Shield from individual physicians.

7. A survey of free care contributed by physicians to patients unable to pay, with subsequent publicity to public and legislature (House of Delegates resolution).

8. Document containing latest data on old age health plans, excerpts from letters of Reps. Curtis and Hall and factual material to be distributed to all members for use before public meetings (House of Delegates resolution).

9. Other projects as opportunities present.

On motion of Dr. Stuart, duly seconded, this program was approved.

### KING-ANDERSON BILLS

Mr. Woolley of the American Medical Association discussed the present situation on attitudes on legislation such as the King-Anderson, the general attitude for a centralized government which has developed during the last 30 years and the need for good representation at hearings in Washington.

### ANNUAL SESSION

Dr. Matthews discussed recent annual sessions and possibilities of making the session more attractive to obtain attendance by a larger percentage of the membership. He outlined a suggested program for the 1962 session.

### HONORARIUMS

In the discussion of the session it was pointed out that more and more organizations are paying honorariums for speakers. After discussion, on motion of Dr. Dowell, duly seconded, it was voted to empower the program chairman to pay honorariums to out of state speakers.

### MSMF

Mr. O'Brien reported that a charter had been issued to the Missouri State Medical Foundation on March 31, 1961, and that an attorney is proceeding with negotiations to secure a ruling from the Internal Revenue Service so that all gifts to the Foundation will be deductible from federal income taxes of the donor. The attorney has advised that a resolution should be adopted transferring the notes due from students and the balance of the funds now in the MSMA bank account to

Fifty year men received recognition at the Annual Banquet.

the new foundation. On motion of Dr. Whitener, seconded by Dr. Dowell, adoption of such a resolution was voted.

It was reported that there are now 59 loans out, amounting to $30,015.00. The possibilities of obtaining direct donations to the Foundation were discussed.

### TREASURER'S REPORT

Dr. Doyle presented the Treasurer's report reviewing the financial status of the Association. On motion of Dr. Dowell, duly seconded, the report was accepted.

### PUBLIC HEALTH

Dr. Hardwicke asked that he might have an Advisory Committee to study a plan for the next two years now being developed. He said that the Division of Health would have more monies for maternal and child health activities, cancer control, heart disease, tuberculosis control, venereal disease control during the next biennium.

### NURSING HOMES

Dr. Hardwicke reported that 24 nursing home institutes have been held, in most of which physicians have taken part. He said there were now 454 nursing homes in the state, 75 per cent of which were licensed, and 98 per cent had completed requirements for fire and safety. He said that while the number of nursing homes in the state had decreased, there had been an increase of 3,000 beds.

### ADVISORY COMMITTEE

Dr. Hollweg reappointed Drs. Stuart, Barger and Matthews as an Advisory Committee to the Division of Health to review the new state plan.

### H.R. 4998

Dr. Hardwicke reported that H.R. 4998 would amend the Public Health Service act increasing appropriations for community health services and providing greater appropriations under Hill Burton for nursing home construction on a state matching basis. On motion of Dr. Dowell, seconded by Dr. Stricker, it was voted that the legislation be supported in principle since control seemed to be in the hands of the states.

### CALIFORNIA M.D.-D.O. SITUATION

Information was presented on the situation in California where the societies of the M.D.'s and D.O.'s are considering consolidation. After discussion, it was voted, on motion duly seconded, that Missouri Delegates to the AMA be instructed to reintroduce the resolution removing the word "Cult" from the AMA code of cities in defining osteopathy.

### COMMITTEES

Dr. Summers appointed Dr. Peter G. Danis, St. Louis, to the Committee on Scientific and Postgraduate Work.

He appointed the following committee on Radiology and Ionizing Radiation: Drs. Wendell G. Scott, St. Louis, Chairman; Milton Shoss, Cape Girardeau; Arthur B. Smith, Kansas City; Marvin L. Napper, Springfield; Mark D. Eagleton, Clayton.

Dr. Hollweg appointed the following Committee on Corporate Practice: Drs. Donald M. Dowell, Chillicothe, Chairman; R. O. Muether, St. Louis; J. H. Summers, Lebanon; H. W. Benoit, Kansas City; John P. Ferguson, Springfield; Robert Kelley, St. Louis; Emmett B. Drescher, St. Louis; John J. Modlin, Columbia; Ralph Perry, Kansas City.

Dr. Hollweg appointed the following Committee on Public Service: Drs. R. O. Muether, Chairman; J. H. Summers, Donald M. Dowell, Byron M. Stuart, Leonard T. Furlow and Kenneth C. Hollweg.

### PRESIDENT'S EXPENSE

Dr. Barger pointed out that the President of the Association must make many trips during his term of office and do many things that incur expense, and moved that the President of the Association be reimbursed for expenses incurred from the beginning of his term of office. The motion was duly seconded and passed.

### VENDOR PAYMENTS

It was reported that Mr. Proctor Carter had had difficulty in excluding payment for physicians' services in x-ray, pathology, anesthesia and physiotherapy in the Vendor Program. He had asked that this be changed in view of the acceptance by the MSMA House of Delegates of the Kerr-Mills Law, since the Vendor Program is partial implementation of Kerr-Mills. On motion of Dr. Whitener, duly seconded, it was agreed to advise the MSMA representatives on the State Advisory Committee, Drs. Rowlette and Peterson to comply with Mr. Carter's request.

### NEXT MEETING

It was decided that the next meeting of the Council would be held in Chillicothe in September 16 and 17.

## Meeting of September 16-17, 1961

The Council met at the Strand Hotel, Chillicothe, September 16-17, 1961, with Kenneth C. Hollweg, M.D., Kansas City, Chairman, presiding. Those present were Drs. Hollweg; J. H. Summers, Lebanon; Donald M. Dowell, Chillicothe; John I. Matthews, Jefferson City; Joseph L. Fisher, St. Joseph; Avery P. Rowlette, Moberly; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Paul R. Whitener, St. Louis; Doyle C. McCraw, Bolivar; A. E. Stricker, St. James; J. Loren Washburn, Versailles; H. M. Hardwicke, Jefferson City; Eugene Schwartz, Springfield; Vernon E. Wilson, Columbia; Messrs. James W. Foristel, Washington, D. C.; Frank Wooley, Chicago; John Buckner, Springfield; Edgar Mothershead, Hollister Smith, Lemoine Skinner, Gene Lunn, Jordan Singleton, Ray McIntyre, Tom P. Fox, T. R. O'Brien, St. Louis; Helen Penn, St. Louis.

### TREASURER'S REPORT

In the absence of the Treasurer, Mr. O'Brien presented a report of income and expenses for the year to date, the current cash balance and a letter from the Mercantile Trust Company recommending that investments remain the same at this time. On motion of Dr. Dowell, duly seconded, the report was accepted.

### PUBLIC SERVICE

The following report, including the Triple-Point Program, was presented:

Triple Point Program: Dr. Muether called attention to the "triple-point" program which had been presented to the Council and which appeared in the Council minutes. He also called attention to the House Concurrent Resolution No. 24 which sets forth a study by a legislative committee for needs of the aged in Missouri, to be conducted between sessions, as follows:

House Concurrent Resolution No. 24: WHEREAS, One of the major problems for the senior citizens of our nation is obtaining necessary and proper medical assistance; and

Whereas, This problem is especially acute in Missouri because of the unusually high percentage of elderly people residing in our state; and

Whereas, The General Assembly has been unable to arrive at acceptable solutions for this problem because of the lack of sufficient information and because the pressure of legislative activity leaves little time for a detailed study of situations and conditions relative to the problem; and

Whereas, The members of the House Committee on Public Health and Welfare recommended the establishment of an interim committee to make a complete investigation in this area; now, therefore, be it

*Resolved,* By the House of Representatives, the Senate concurring therein, that a joint committee of the general assembly be created to be composed of five members of the House to be appointed by the Speaker of the House, and five members of the Senate to be appointed by the President Pro Tem, to make a complete and thorough study of the problem of providing medical assistance to the senior citizens of Missouri; and be it further

Dr. Edward R. Annis was speaker at the Annual Banquet.

*Resolved,* That the committee and its members are authorized to hold meetings and perform their duties during the interim between the adjournment of the 71st General Assembly and the convening of the 72nd General Assembly; and be it further

*Resolved,* That the committee prepare and submit a report to the 72nd General Assembly by the end of the second legislative week of the regular session thereof, together with the proposals it deems appropriate; and be it further

*Resolved,* That the Committee on Legislative Research be requested to provide professional, clerical or other services as the committee may require in the performance of its duties; and be it further

*Resolved,* That the actual and necessary expenses of the committee shall be paid from the joint contingent fund.

A review and proposed activity of the triple-point public service program was presented.

Discussion: In discussion, the vendor program was reviewed; the Marion County bulletin and its possible adoption by other societies was proposed; the possibility of a meeting of public relations personnel of component societies; the advisability of each component society having at least one public service project; the need for intensified action until the close of Congress, followed by component society activities; the possibility that the vendor law should be the basis for possible development of Kerr-Mills act; the impossibility of knowing the number of "near needy" in any community.

Action: It was decided that the Committee on Medical Economics be asked to work out figures on the needs in the state to present to the legislative committee.

Hospitals: Mr. Fox reported on a meeting of hospital personnel and said that the hospitals had taken a stand against health care under Social Security. He said that the Missouri Nurses Association had taken a similar stand, which is opposed to the stand that was taken nationally by that group. He said that the Missouri Hospital Association would like a joint committee with the Association to discuss mutual matters.

Advertisement: Dr. Stuart presented copies of the *Boonville Daily News* in which the physicians of Boonville had placed an advertisement stating the position of physicians concerning the King-Anderson bill. The paper had carried an editorial on the subject. Druggists in Boonville were also placing advertisements in the paper. He said that the one advertisement had been placed at a cost of approximately $5.60 per physician.

Future Programming Suggestions: Kerr-Mills: 1. In view of the legislature's reaction to the cost estimates of immediate full Kerr-Mills implementation, the possibility that the Association define more closely the details of the Kerr-Mills program needed in Missouri is suggested. If it is decided that proposals for implementation will have to be on a limited initial basis, as a foundation on which to build, concrete suggestions as to the kind and amount of benefits, along with terms of eligibility, are probably needed.

2. A study of the aging population of outstate Missouri by the Department of Rural Sociology, University of Missouri—the number, economic status, medical care needs, and especially the trends in these things—has been suggested to help establish the facts in this field, and perhaps the trend toward lessening of the problems.

3. As fully as possible, the Association should cooperate with the legislature's joint interim study committee.

4. Through all media, the Association should continue its efforts to gain understanding and support for the Kerr-Mills program by special groups and the general public. Major in this effort will be work by and through local medical societies on a regular program basis, utilizing the same kind of organizational activities necessary for King-Anderson opposition.

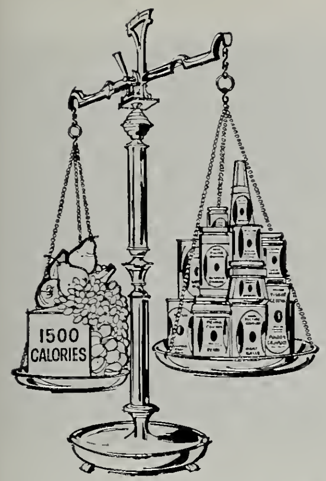
King-Anderson: 1. Bulletin to all local societies in very near future outlining organization along lines suggested by Illinois State Medical Society and re-emphasizing AMA organizational suggestions contained in "Action Kit." This will be an effort to obtain more formal and effective organization in each society.

2. For background, bulletin to members adapting Dr. Howard's talk at AMA Legislative Conference in March, "The Issues in Social Security Medical Legislation."

3. An attractive pamphlet reprint of *AMA News* editorial explaining the virtues of opposing the wrong—to be sent all members with suggestion they distribute through their offices.

4. Bulletin to membership reprinting Representative Curtis' letter to inquirers about Social Security medical legislation, and other material.

5. Continuing efforts on state and local level to organize opposition to King-Anderson proposals, inform general public through all possible means of the dangers, provide extensive background at every opportunity, and to stimulate extra letter writing to Congress at appropriate times.



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| Apple-Grape Drink | ½ cup | 20 | 52 |
| Five-Fruit Juice Breakfast Drink | ½ cup | 20 | 52 |
| Braised Beef and Vegetables | 6½ oz. | 184 | 380 |
| Meat Balls in Brown Gravy | 3½ oz. | 84 | 280 |
| Chopped Chicken Livers | 1 oz. | 31 | 100 |
| Chicken a la King | 3 oz. | 72 | 230 |
| French Style Dressing | 1 tbsp. | 10½ | 60 |
| Brown Gravy | 1 tbsp. | 7 | 21 |

| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Applesauce | ½ cup | 48 | 90 |
| Fruit Cocktail | ½ cup | 44 | 90 |
| Cherry Pie Filling | 1 oz. | 20 | 60 |
| Chocolate Topping | 1 tbsp. | 8 | 63 |
| Preserves (Peach, Strawberry) | 1 tbsp. | 9 | 55 |
| "Maplette" Syrup | 1 tbsp. | 9 | 55 |
| Liquid or Powder Sweetener | (to equal 1 tbsp. of sugar) | 0 | 16 |

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UNIVERSITY OF MARYLAND

Local Action Programs (Special Projects): 1. Bulletin to societies reemphasizing plan of special local action projects, with view of having each society establish one such project in its program for fall.

2. Meetings of staff members with local societies or representatives of groups of societies to stimulate local action projects and to urge that they take advantage of public relations potential of regular society programs. A pilot meeting of this type is scheduled for mid-August with the Cole County Society.

3. Dr. Hardwicke has offered to give over sponsorship of various Division of Health programs, such as cancer control, tuberculosis control, nursing home and home care projects, to local medical societies. If approved, this plan would enable local societies to obtain public credit for various health programs in large part organized and financed by the state.

4. Continuing work to stimulate and assist local societies to investigate areas of greatest need, establish projects, work cooperatively with other community groups to solve problems and obtain suitable public recognition of their efforts.

Regular Programs: 1. Bulletin to local societies describing Marion-Ralls-Shelby activities, discussing communications with members, local programs and publicity opportunities.

2. A Welcome Wagon folder has been prepared for the Boone County Society, which, when printed, can be distributed to other societies as a suggestion for their similar use.

3. A new edition of the County Society Public Relations Manual is being published by the AMA, and will be distributed to all Missouri societies.

4. The St. Louis Medical Society, in conjunction with the Matthews Medical Books Company, has recently developed a books scholarship program for Washington and St. Louis University medical students which will provide free books for selected students for the four-year period. Investigation will be made to see if this program can be extended to the University of Missouri.

5. Continuing efforts will be made to stimulate establishment of regular local society programs in the public interest and to obtain suitable publicity for them.

General: 1. Solicitation of funds for the Student Loan Foundation, with series of publicity releases on tax status, results of solicitation, major gifts, loans, etc., when tax-deductible status is established.

2. Continuing publicity on regular association programs, such as AMEF campaign in October, preceptorship programs, physician placement activities, etc.

In discussion it was brought out that the Missouri Hospital Association opposed the King-Anderson bill but did not send in statements. It was announced that a bulletin rounding up the testimony on the King-Anderson will go to the membership within a short time.

It was announced that there will be six hearings on aging problems conducted by the U. S. Senate Committee on Aging in Missouri, the tentative schedule being Kansas City, December 6; St. Louis, December 8; St. Joseph, December 11; Springfield, December 12; Hannibal, December 13; and Cape Girardeau, December 15. This was discussed and it was decided, on vote after motion of Dr. Dowell, duly seconded, that representatives of the county societies involved should request permission to present the viewpoint of medicine. It was suggested that information be secured from the AMA on similar meetings held prior to the meetings in Missouri. It was pointed out that while Senator Edward V. Long of Missouri, a member of the Senate Special Committee on Aging subcommittee on Retirement Income, would chairman the meetings, it was definitely felt that discussion would not be restricted to retirement income.

**Entertainment was furnished following the dinner on Sunday evening.**

### AMA

Mr. Woolley spoke briefly on the work of the AMA and said that the AMA was pleased with the progress in Missouri. He reported that Christian Church International Assembly is to be held in Kansas City the latter part of September which will be attended by 10,000 to 12,000 and that a resolution is to be offered urging the Assembly favor the King-Anderson Bill. He said that much of the federal administration program had been accomplished this year and that next year the concentration would probably be on legislation such as the King-Anderson Bill. He pointed out that the Ways and Means Committee might change by the time of the next session and might not be as sympathetic to medicine as the present one had been. He stressed that there should be letters from each component society to their Congressmen.

### REPORT OF COMMITTEE ON TRAUMA RE: (CRASH INJURY PROGRAM)

Mr. Fox explained the Cornell University Automotive Crash Injury Research Program and said that an attempt had been made previously to have the study include Missouri. At that time the Highway Department was not in position to contribute to the study, but that now it seemed that it may get underway. The study needs approval by the state medical association, the state hospital association, and the state division of health. All data is sent to Cornell University where it is studied and recommendations made. As an outline of the proposed study in Missouri, the following was presented:

"Because of the pressing need to evaluate the effectiveness of recent automotive safety design modifications in terms of reducing injury consequences, it is proposed that in the State of Missouri the study be confined to accidents involving recent year model cars (to be specified during such sampling period, for example, '58, '59, '60, '61) in which injuries occur.

"The Missouri State Highway Patrol Summary Report of 1960 Accidents has been used as a guide to arrive at the estimated volume of cases. The sampling plan is designed to yield case reports on applicable passenger cars in approximately 650 accidents annually, which represents about one in twelve of all injury-producing accidents investigated by the Highway Patrol.

"To obtain an adequate volume of representative cases without imposing too great a loan upon any single group a study plan is proposed which calls for the rotation of sampling areas over a two year period.

"This study is concerned with selected passenger cars only; no trucks, buses, motorcycles, pedestrians, etc., are included."

On motion of Dr. Stuart, the report was approved.

### AMEF

A brief report on the American Medical Education Foundation was presented, stating that each year the number of contributions and the number of contributors was increasing, but the needs of the medical schools was increasing at even a greater pace. It was stated that a letter will be sent to all members within a short time and also that material on AMEF will appear in the October MISSOURI MEDICINE.

### AMA SESSION

Dr. Washburn reported on the June session of the AMA, calling attention to the report in the August issue of MISSOURI MEDICINE, and stressed the resolution concerning osteopathy, resolutions on communications, the resolution on efficacy of drugs, polio vaccine, and called attention to the raise in A.M.A. dues, $10 beginning in 1962 and an additional $10 beginning in 1963. Dr. Summers congratulated the delegates on their diligent attendance at sessions and their work at the meeting. A question was asked concerning action on disability insurance and it was answered that this was referred to the Board of Trustees of the AMA for report at the next session of the House of Delegates.

### AMA WASHINGTON REPORT

Mr. James W. Foristel, of the AMA Washington office, reported on legislation adopted and still pending in Congress.

### MISSOURI LEGISLATIVE ACTIONS

Mr. O'Brien reported on the final outcome of legislation considered by the Missouri legislature since the last meeting of the Council. H. B. 133, the chiropractic bill, was vetoed by the Governor.

### RESOLUTION 24

The House Concurrent Resolution No. 24, included in the report of the Committee on Public Service, was discussed. The members of the Interim Committee on Medical Care for the Aged are Senators William J. Cason, Clinton; Robert M. Coleman, Kansas City; Albert M. Spradling, Cape Girardeau, and Jack S. Curtis, Springfield; Representatives William R. Brazelton, Kansas City; James W. Williams, St. Joseph; James C. Skaggs, Ellington; J. J. Wimp, Kirksville, and Oscar L. Marsh, Aurora. The committee will meet on October 3 to elect a chairman and outline its work.

### MEDICARE

Mr. O'Brien explained the new contracts on Medicare which included the restriction that there should be no published fee schedule. Since the House of Delegates had ruled that there should be a published fee schedule, and the contracts end September 30, the action possible for the Council to make was discussed. It was agreed that efforts to clarify the situation should be made.

### ACTION OF AMA ON OSTEOPATHY

The resolution passed by the AMA House of Delegates concerning osteopathy was discussed, with the possibility of the appointment of a committee to confer with the osteopathic association concerning the resolution. In discussion it was pointed out that the MSMA bases its code of ethics on that of the AMA and that possibly no action was needed, either in approval of the AMA action or the appointment of a committee. On motion of Dr. Barger, duly seconded, it was voted that MSMA accept the action of the AMA House of Delegates, Dr. McCraw dissenting.

### INFANT AND CHILD CARE

Dr. Schwartz presented the report of a meeting of the Committee on Infant and Child Care as follows:

Present: Drs. Schwartz; H. M. Hardwicke, Jefferson City; Daniel B. Landau, Hannibal; H. E. Petersen, St. Joseph; Guy N. Magness, St. Louis; James J. Pascoe, Nevada; S. F. Cockerell, Independence, members of the committee; Drs. Hardwicke; Donald M. Dowell, Chillicothe; John I. Matthews, Jefferson City; J. H. Summers, Lebanon; Cecil G. Leitch, Blue Springs; Roy W. Pearse, Jr., Nevada; John F. Pearl, St. Clair; C. W. Meinershagen, Jefferson City; Miss Ethel Amstaett, Kansas City, public school nurse; Miss Helen Pfaff, Division of Health, Jefferson City; Mr. Homer Bolen, Department of Education, Jefferson City; Mr. Fred L. Rector, Department of Education, Jefferson City; Mr. Ray McIntyre and Miss Helen Penn, St. Louis.

H. B. 334: Dr. Hardwicke reviewed the history of H. B. 334, it being sponsored and introduced by the Junior Chamber of Commerce, its review by our committee with recommended changes, the large attendance of opponents at hearings necessitating a second hearing. He explained that he had not asked funds for the carrying out of the bill because he felt it was principally concerned with the private physician. He said that Section 3 was an amendment to the original bill. He reported that he had conferred with the Department of Education and that he felt there would be no difficulty in that phase. Dr. Hardwicke said that antecedent power of school boards could upgrade a state law.

Legal Opinion: Dr. Magness said that the attorney for the University City Schools had said that in his opinion inclusion of the written excuse circumventing immunization made the bill impossible of executing. After discussion by Mr. Bolin, Drs. Hardwicke, Pascoe, Pearse, Leitch and Cockerell, Dr. Cockerell moved that Dr. Hardwicke be asked to get an opinion from the Attorney General whether or not a school board can require immunization in view of Section 3. This was seconded and passed. It was suggested that this opinion go to all schools with the communication that the Department of Education plans for September 1. In the discussion it was brought out that a method of clearance between schools and doctors would be needed.

Suggested Regulations: Dr. Hardwicke presented "Preliminary Ideas and Regulations for Implementation of Compulsory Immunization Law, as follows:

I. General Considerations: No special funds were appropriated to carry out this legislation.

Unless special effort is made to promote immunization in infancy, this new legislation may move us backward rather than forward because of the tendency of parents to wait until their children enter school before having them immunized.

In the absence of sufficient state funds, it may be necessary for some schools to place emphasis on getting students admitted for the first time properly immunized. Children of all ages should certainly be protected against polio, but it is doubtful that the Division of Health will be in a position to purchase polio vaccine for those children not now vaccinated (mostly indigent).

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Many school systems, especially the larger ones, have effective programs in operation which achieve near maximum immunization levels. If possible, our plans should allow for a smooth transition of such schools of conformance with the new law.

Because of the inability of the Division to directly provide immunization of medically indigent children and because of the considerable variation in local medical and public health facilities, a fixed state-wide plan would be unworkable, as well as costly. There must be sufficient flexibility in the state plan to meet varying local conditions.

In the absence of any penalty provision in H. B. 334, enforcement will apparently rest entirely upon education and an assumption that parents will have their children immunized because "it's the law." Reference to this aspect of the law should be limited to school superintendents.

"Infectious Diseases" were discussed at the Session.

This program should serve to stimulate parents to keep immunization records for their children.

II. Rules and Regulations Governing Immunization to Be Required of Children Attending Public, Private, Parochial, or Parish Schools (Under H. B. 334, 71st General Assembly).

This was discussed, and the present difficulties over vaccines was brought out. After discussion it was voted, on motion of Dr. Landau, that the schedule of ages for immunization should follow those set out by the Committee on Control of Communicable Disease by the American Academy of Pediatrics. Dr. Hardwicke said that this portion of the regulations would be rewritten to comply with this instruction as follows:

"II A. Minimum immunization required for children attending public, private, parochial, or parish schools shall be those set forth in the January, 1961, publication of the Committee of Infectious Diseases of the American Academy of Pediatrics as follows: (These may be given individually or in combination at the discretion of the physician.)"

Schedule for Active Immunization of Infants and Children

| *Age* | *Preparation* |
|---|---|
| 1½ to 2 months | D. P. T.<br>Poliovaccine |
| 3 months | D. P. T.<br>Poliovaccine |
| 4 months | D. P. T.<br>Poliovaccine |
| 6 to 12 months | Smallpox vaccine |
| 12 months | D. P. T.<br>Poliovaccine |
| 2 years | Poliovaccine |
| 4 years | D. P. T.<br>Poliovaccine |
| 6 years | Smallpox vaccine<br>Poliovaccine |
| 8 years | D. T. ("adult type")<br>Poliovaccine |
| 10 years | Poliovaccine |
| 12 years | D. T. ("adult type")<br>Poliovaccine |
| 14 years | Poliovaccine |
| 16 years | D. T. ("adult type")<br>Poliovaccine |

Regulations: Dr. Hardwicke continued with the regulations as follows: "B. Vaccine dosage: The volume of injected antigen (vaccine) per injection shall be in accordance with the directions of the manufacturer.

"C. Record of Immunization: The statement of a parent or guardian regarding types and dates of immunizations received by his child shall be deemed satisfactory evidence of such immunization for purposes of the school superintendent's records.

"A written statement of a licensed physician that he is in the process of immunizing a child shall be deemed satisfactory evidence that such a child is being immunized. Such a statement shall be required at monthly intervals until the required immunizations are completed.

"D. Definition of Superintendent: School superintendent shall mean the chief administrative officer of any public, private, parochial, or parish school system."

III. Possible and Alternative Methods of Securing Immunization of Those Unable to Pay.

The program in any particular county, city or community will obviously depend upon the attitude of the physicians, school authorities, and the people in general, upon the medical and public health facilities available, upon the funds available and methods of financing, upon the number of children needing free service, and perhaps upon the intensity with which the program is executed. A single part of any one of the following methods could be interchanged with the same part of another method, thus producing a multitude of possible procedures. Whatever method is followed, the school authorities and physicians, along with any other group involved, must reach agreement on the details of the procedure to be used.

1. If the physicians wish and if they are in agreement, patients may be referred by the school authorities to the physicians' offices with a note indicating that the child is eligible for free vaccination. In this case the school people would be determining ability to pay. This is now being done in regard to eligibility for free school lunches. The physicians may wish to make this determination but this might produce difficulties, especially for the physicians. Under this program, the Division of Health, through its local and district offices, would furnish vaccine for free immunization to the fullest extent possible.

2. After reasonable effort to induce parents to have their children immunized through their own resources, an immunization clinic could be established, preferably for an entire county or an entire large to moderate sized town, to which children would be referred for free or part pay service. Eligibility, again, would be determined by the school authorities. Vaccine for free immuniza-

tion would be supplied by the Division—as far as possible.

3. Medically indigent patients could be referred to the local health department or nursing service, if any. In the absence of a health officer or physician directly associated with the local health office, referrals would have to come from a physician with a request that the nurse immunize a specific individual for specific diseases.

4. Immunization clinics could be conducted in schools with local physicians and nurses staffing such clinics.

5. Whenever possible, the school conducting an immunization clinic should send to the family physician, information about the date and type immunization received by each individual. This interchange of information will keep the family physician's records complete.

6. It is the responsibility of the school superintendent to contact the local physicians concerning any immunization program to implement provisions of this law.

In discussion, it was pointed out that the superintendent would probably have to be the spearhead in carrying out the bill, but that education to the schools, the public and physicians would be needed.

The following schedule was presented by Dr. Hardwicke:

IV. Schedule for further planning and implementation of H. B. 334.

A. On August 4, 1961, copies of law will go to all local health units with a brief explanation of preliminary plans.

B. Doctor Hardwicke will meet with the medical advisory group in Jefferson City on August 13 to work out plans to secure maximum immunization protection for children in conformity with H. B. 334.

C. The Department of Education will mail a summary of all new school laws to school superintendents about September 1, 1961.

D. When final plans and regulations are worked out, necessary information will be sent by the Division of Health to all school superintendents and public health personnel. Notification to physicians to be worked out—possibly through "Pointers."

E. On October 3 and 4, the Department of Education holds a meeting with area supervisors and time will be allotted the Division of Health to discuss this program. Area supervisors have frequent personal contact with superintendents and can thereby facilitate initiation of this program.

It was suggested that the Academy of Pediatrics schedule on immunizations go to all physicians. It was pointed out that schools would have to keep records on immunizations and it was suggested that families be encouraged to also keep such records.

Health Courses: Dr. Magness reported that the teaching of health had been discontinued in the St. Louis schools and that he felt that this should be taken up with the Department of Education and that it be made a required course. Mr. Bolin said that while the Department was in sympathy with the idea, that they were deluged with requests for subjects to be required. It was decided that the Committee as such should discuss this problem.

Following lunch, the Committee members present convened and discussed the teaching of health in schools. On motion of Dr. Magness, it was voted that the committee recommend to the Council for consideration and presentation to the House of Delegates a resolution recommending to the Department of Education encouraging them to make the teaching of health a required part of the school curriculum in accordance with the resolution passed by the A.M.A. House of Delegates in 1960.

Education on Bill: Dissemination of information on H. B. 334 was discussed and it was the general feeling that the burden was on the Division of Health. Dr. Schwartz was asked to report to the Council on this meeting and on the actions taken by the committee pertaining thereto.

**The Fifty Year Club held** a luncheon meeting.

On motion of Dr. Stricker, the report was accepted.

### FIELD SECRETARY REPORT

AAGP Survey: Mr. McIntyre reported that at a meeting on Saturday of the American Academy of General Practice that a survey sponsored by the AAGP was reported, showing that 75 per cent of individuals contacted approved of their personal physician, but that less than half of this number approved of physicians in general. Mr. McIntyre pointed out that projects changed the attitude toward any group and used the Boy Scouts as an illustration. He reported one project by component medical societies that had been outstanding and that had received favorable comment was on "Athletic Injuries" to which coaches and interested persons were invited. He said such programs had been held in St. Louis, Rolla and Nevada recently.

Missouri State Medical Foundation: Mr. McIntyre reported that to date 62 students had received loans for medical education; five have received two loans for different years; 55 loans had gone to University of Missouri students, five to St. Louis University students, one to a Washington student and one to an Albert Einstein University student. He said that there were now seven loans pending, amounting to approximately $5,000, and that the fund now had $9,900, of the original $50,000. It was reported that attorneys were working toward a clearance with the Internal Revenue Department to have any donations made tax deductible. Dr. Wilson said that there would be a need for about $25,000 in loans during the year at the University of Missouri. Mr. Buckner said that the Greene County Medical Society had loaned $5,400 so far this year.

Preceptorship Program: Mr. McIntyre presented a list of physicians who have agreed to take preceptees this year. He said that 23 students had elected this program for this year.

Physicians Located: Mr. McIntyre reported that 26 physicians had located in nonmetropolitan areas since the first of the year, and of these 10 were graduates of the University of Missouri.

### ANNUAL SESSION

Dr. Matthews reported that the Woman's Auxiliary of St. Louis and St. Louis County Medical Society wished

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to furnish entertainment for the Sunday evening of the session. He pointed out that the Association wished to continue having county society presidents and secretaries and new members as guests and having receptions in various hospitality rooms, but that entertainment following the dinner seemed acceptable to him. It was felt that the Association could not assist financially in furnishing such entertainment, however. Dr. Matthews moved that the Auxiliary be written that entertainment would be appreciated and that a committee be appointed to work with them on the planning. On second, the motion was passed.

The chairman appointed Drs. Whitener, Furlow and Matthews to serve on this committee.

### MENTAL HEALTH

A report of a meeting of the Committee on Mental Health held July 9 was presented, and it was also reported that the Committee would meet again soon for further study and, on motion, duly seconded, action was deferred until the further report of the Committee.

### CIVIL DEFENSE

Dr. Hardwicke discussed several aspects of public health and announced that Dr. Carl Siegel had been appointed a coordinator on civil defense in the Division of Health. Dr. Hardwicke reported that studies of fall-out had been made in Missouri and discussed the effects of fall-out in case of an atomic invasion. He discussed a conference on aging and the changed standing of physicians in their communities. He pointed out that Sweden had the most complete socialization of any country, including medicine, but also had the highest suicide rate of any country.

Since Dr. Siegel is Chairman of the MSMA Committee on Civil Defense, it was moved by Dr. Dowell, duly seconded, that either he or Dr. George Watkins attend the Civil Defense Conferences to be held in the near future, expenses to be paid by MSMA if not covered otherwise.

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Dr. Wilson said that he wished to thank members of the Association for assistance with the appropriation bill for the Medical School of the University in the recent legislature.

### BUDGET COMMITTEE

The Chairman appointed the following Budget Committee: Drs. Doyle, Stuart, Summers, Barger, Dowell and Hollweg.

### DR. AND MRS. DOWELL THANKED

On motion of Dr. Barger, duly seconded, a vote of thanks was given Dr. and Mrs. Dowell for their hospitality and entertainment during the meeting.

### NEXT MEETING

It was decided that the next meeting of the Council would be held December 2 and 3 in St. Louis.

## Meeting of December 2-3, 1961

The Council met at Hotel Chase, St. Louis, December 2, 3, 1961, with Kenneth C. Hollweg, M.D., Kansas City, Chairman, presiding. Those present were Drs. Hollweg; J. H. Summers, Lebanon; Donald M. Dowell, Chillicothe; John I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; Joseph L. Fisher, St. Joseph; A. P. Rowlette, Moberly; Leonard T. Furlow, St. Louis; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Doyle C. McCraw, Bolivar, E. A. Stricker, St. James; W. D. English, Cardwell; H. M. Hardwicke, Jefferson City; Messrs. John R. Buckner, Springfield; Edgar Mothershead, St. Louis; Hollister Smith, St. Louis; Lemoine Skinner, Jordan Singleton, Gene Lunn, Ray McIntyre, T. R. O'Brien, Thomas Fox, and Miss Helen Penn, St. Louis; Frank Woolley, Chicago. Attending part of the meeting were Drs. Vernon E. Wilson, Columbia; Florence MacInnis, Kansas City; Ray Williams, St. Louis.

### RIBICOFF HEARING

Mr. O'Brien reported on the Ribicoff hearing held in St. Louis and said that from the standpoint of medicine, the meeting went well and that publicity in the newspapers was good.

### H.R. 24

Mr. O'Brien reported that the Legislature had set up a committee to study the problems of aging in the state and this committee had had three hearings. He said that he requested permission for an Association witness to appear after the meeting of the House of Delegates next spring.

### MCNAMARA HEARINGS

Mr. O'Brien outlined the preparation that had been made for the six McNamara hearings that will be held during the early part of December in Missouri.

### MEETINGS

Mr. McIntyre reported on several meetings that had been held recently, including one at Moberly where lay guests were present at which Mr. James Foristel of the AMA Washington office had been the speaker; a meeting at Cape Girardeau when Mr. Foristel talked to the Rotary Club with a number of doctors present, and a meeting at Hannibal at which Mr. Woolley of the AMA was the speaker. He said that Dr. Summers spoke at the Cape Medical Society meeting, November 6, and was scheduled to speak at the Grand River Medical Society on December 14.

**"Your Estate and You"** was a panel presentation on the program.

### PRECEPTORSHIP PROGRAM

Mr. McIntyre announced that five perceptees are with physicians in the state at present and that three would be going out on December 3. He said that many preceptors continued in the work but that more would be needed as the program grew.

### MISSOURI STATE MEDICAL FOUNDATION

The following report on the Missouri State Medical Foundation was presented: Total number of students who have received loans, 66; total number who have received loans for two school years, 16; number of seniors in 1960-1961 who have received loans, 28. The loans have gone to 58 students at the University of Missouri, five at St. Louis University, one at Washington University, one at Albert Einstein University and one at MeHarry University. It was reported that one was pending for Tulane University. Receipts to date were given as $51,700 (including three contributions in addition to that made available by the Association), total loans to date $44,430.00, leaving $7,270.00 in the fund. Dean Wilson said that from $20,000.00 to $25,000.00 in loans to medical students would be needed from some source during the rest of this school year.

### EYE HEALTH

The report of the Committee on Eye Health was presented as follows:

Committee on Eye Health
Missouri Hotel—Jefferson City
November 19, 1961

Presiding: John McLeod, M.D., Kansas City, Chairman.

Present: Drs. McLeod; Michael F. Pernoud, St. Louis; H. B. Stauffer, Jefferson City; Paul G. Wolff, Cape Girardeau; Dick H. Underwood, Kansas City; D. E. Eggleston, Macon; and W. L. Post, Joplin.

Absent: Drs. H. B. Ivy, Springfield; Paul M. Beck, St. Joseph; Robert S. Minton, St. Joseph; and Vernon G. Jackson, Fulton.

Others Present: Drs. Buesseler, Schwartz and Russell of the University of Missouri School of Medicine; T. E. Sanders and Robert Dean Mattis, St. Louis; Mr. T. R. O'Brien, St. Louis.

Eye Bank: A letter received from the Dean of the University of Missouri School of Medicine regarding eye banks was referred to the Committee by the Council.

The Committee obtained information from the American Academy of Ophthalmology and Otolaryngology regarding eye banks, including a Code of Ethics prepared by the Academy.

In October 1961, the Eye Bank Association of America (a federation of eye banks) was formed and uniform standards and procedures, including a code of ethics, were adopted. The Committee on Eye Banks of the American Academy of Ophthalmology and Otolaryngology will serve as an advisory committee to the Eye Bank Association.

The Committee on Eye Health recommends that the Missouri State Medical Association should support and endorse the formation of eye banks in our state, wherever and whenever need is demonstrated so long as such eye banks conform with the qualifications and code of ethics required by the Eye Bank Association of America.

At the present time, two eye banks are in operation in Missouri which meet the standards referred to. These are the Eye Bank of St. Louis, located at the Washington University School of Medicine, and the Eye Bank at the University of Missouri School of Medicine, Columbia.

Optometry: Optometric legislation was discussed.

It was pointed out that the code of ethics concerning eye banks was still changing and it was pointed out that the Committee on Eye Health is aware of this, and is not requesting that the code be approved at this time, and on motion of Dr. Dowell, duly seconded, the report was accepted.

### MEDICAL ECONOMICS

The report of the Committee on Medical Economics was presented as follows:

Committee on Medical Economics
Coronado Hotel, St. Louis
October 22, 1961

Presiding: G. W. Winn, M.D., Boonville, Chairman.

Present: Drs. Winn; John R. Forgrave, St. Joseph; Byron E. Watts, Jefferson City; George L. Hawkins, St. Louis; E. T. Hansbrough, Poplar Bluff; Rae W. Froelich, Lebanon; Messrs. Lemoine Skinner, Jordan Singleton, Gene Lunn, Tom P. Fox, Tom R. O'Brien, and Miss Helen Penn, St. Louis.

Absent: Drs. Martin Hunter, Kansas City; Kenneth E. Knabb, Springfield.

Kerr-Mills: The situation on the Kerr-Mills implementation in Missouri was reviewed. The joint report of the Committees on Aging and Medical Economics, as amended by the House of Delegates in March 1961, resulted in the adoption of the resolution "Be it resolved, That the House of Delegates endorse the principles of the Kerr-Mills act and recommend that the act be fully implemented by the Legislature of Missouri to such degree as may appear necessary and in the order of need."

H.B. 690, providing for full implementation of Kerr-Mills for "needy" and "near needy" was introduced on April 4, 1961. The Committee on Public Health of the House held several hearings on H.B. 690, and on H.B. 633, a bill with similar objectives. The estimated cost of the bill, state funds only, ranged from 107 million for the biennium for complete and total implementation, down to 5½ million for minimum implementation only.

Because of the confusion regarding costs of implementing Kerr-Mills, the Assembly adopted H.R. 24, calling for an interim study committee. The Committee, composed of five House members and five Senate members, is chaired by Senator William D. Cason.

Two hearings of this special committee have been held, with a third scheduled for November 3. At that time, the Director of Welfare, Mr. Proctor Carter is scheduled to make his recommendations to the Committee. It appears that the Committee will continue to hold hearings during 1962, probably will not complete its report until late 1962, and actions taken by MSMA House of Delegates in March, 1962, can be submitted after that time.

### VENDOR PROGRAM

Actually, the original "vendor" program was superseded by Kerr-Mills, which contains two parts. In Mis-

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Drs. Griffith, Kozal, Hall, Andrews and Martin discuss legislation.

souri, Kerr-Mills is limited at present to hospitalization and nursing home or home care for the recipients of old age assistance, the so-called, "needy." This care is provided on the basis of the following definitions: "Benefit payment may be made on behalf of recipients of public assistance for the purpose of providing in-patient hospital care to persons requiring hospitalization for medical emergencies or acute serious illness" and "benefit may be made on behalf of a person who is completely bedfast and totally disabled, provided, however, the total monthly payment on behalf of such recipient shall not exceed $100.00."

When the law went into effect the Legislature appropriated $1 million plus $1½ million from the Federal government for the biennium. Under this plan, the hospitals were originally paid $5.00 per diem, later $10.00 and since January, 1961 were paid on a per diem cost, however in the last month of the 1961 fiscal year, June, this was reduced to 75 per cent of cost. There is now approximately $5½ million federal and state money for the present biennium, which is expected to be sufficient to pay hospitals their costs for 14 days of care per year.

Suggestion Reported: A suggestion proposed by a person connected with Blue Cross was reported: That a loan agency, either state or federal, or combination, be established for persons over 65 where such persons may borrow money to meet incurred health expenses not recovered from insurance, etc., with no interest to be charged, but chargeable to their estate if the loan is not paid.

Pay to Physicians: Members of the Committee who were present agreed that physicians should not receive money directly from any state or federal aid program for the indigent, but that physicians should charge fees even though patient is unable to pay.

Action: It was decided that more information was needed before the Committee could take definite action and it was requested that information be obtained as to the cost of *adding:* 1. drugs for those now eligible for care; 2. out patient diagnostic service for those presently eligible; 3. of expanding the present program to include the "near needy" on same basis as present law.

It was decided that a meeting of the Committee on Medical Economics would be held early in December at which time a definite report and action could be determined.

On motion of Dr. Whitener, duly seconded, the report was accepted.

### CIVIL DEFENSE DISASTER MEDICAL CARE

Mr. Fox presented the report of the Committee on Civil Defense Disaster Medical Care as follows:

Committee on Civil Defense Disaster Medical Care
Missouri Hotel, Jefferson City
November 19, 1961

Presiding: Carl D. Siegel, M.D., Sedalia, Chairman.

Present: Drs. Siegel; H. B. Steinbeck, Union; Carroll P. Hungate, Kansas City; John L. Mothershead, St. Joseph; George L. Watkins, Farmington; W. C. Allen, Jefferson City; Messrs. Jordan Singleton and Thomas P. Fox, and Miss Helen Penn, St. Louis.

Absent: Drs. M. P. Leech, Fayette; John H. Walterscheid, Hannibal; Curtis H. Lohr, Clayton; R. Ned White, Springfield; George E. Thoma, St. Louis; O. P. Hampton, University City.

Minutes: Minutes of the meeting of November 20, 1960, were discussed and it was pointed out that the Governor's Civil Defense Advisory Committee, recommended by this Committee, had held one meeting and will soon hold an organizational meeting. The half-day meeting on Civil Defense just prior to the 1961 Annual Session was not held because of lack of time for preparation. The Council had voted to take up expenses as they occurred rather than budgeting a definite amount for the Committee; that the model hospital was displayed at the last Annual Session. The meeting suggested to formulate a uniform medical Civil Defense plan was being started by the Division of Health; and that the contact with other professional groups suggested by the Committee was being carried out by the Division of Health.

Battle Creek Meeting: Dr. Siegel told of a meeting to be held in Battle Creek from December 4 to 7, at which there will be representatives from Civil Defense, medical societies, health divisions and education departments. He said that a medical self help kit would be explained and the plan was that this information be disseminated to the general populus. He said the course was to take up where the Red Cross first aid work left off. Dr. Siegel said that he would attend the meeting.

Denver Meeting: Dr. Siegel reported on a Civil Defense Institute which he attended in Denver on September 16. He said that various states reported on their work and that the over-all planning in Missouri was in line with other states. He said that some states had begun stockpiling of drugs and other supplies and suggested that Missouri begin such work. He said there are now 68 Civil Defense hospitals in the state, some of them stored where there is insufficient personnel for manning.

Civil Defense Conference: Dr. Siegel reported attending the 12th County Conference Annual AMA Civil Defense Conference in Chicago on November 4 and 5. He said it was a practical meeting and that a report of the meeting will be published in J.A.M.A. later. He pointed out that the Division of Health was responsible for a state medical survival plan and that a framework had been set up but that personnel was lacking. He suggested that the Missouri State Medical Association might restate assuming responsibility of furnishing medical care in survival work.

Action: On motion of Dr. Hungate, seconded by Dr. Watkins, it was voted that it be recommended to the Council that Missouri physicians assume the responsibility of medical care in natural or wartime disasters, under the framework of the Division of Health.

Advisory Committee: The Governor's Advisory Committee was discussed and it was pointed out that recommendations must go through the Governor, and that medical members of the Committee must be guided by the MSMA Committee.

Lay Personnel: It was reported that in some states, the phrasing of the Civil Defense law was such that malpractice could not enter into the training of lay personnel for Civil Defense work. It was decided that this should be checked further and that possible changes in the Missouri law might be recommended. Dr. Siegel will inquire further in Battle Creek, December 5.

The Fifty Year Club met Monday noon.

Discussion: The recommendation of shelters, the need to promote immunization prior to disaster, the need to allay public panic without incurring apathy, need for publicity on the self help program, the need for a manpower inventory and information on pharmacy inventories, the need for stockpiling of chemicals for purification of water and other public health measures were discussed.

Los Angeles Conference: Dr. Watkins reported briefly on the Civil Defense Program in Los Angeles in November, saying the highlights were a talk on possibilities of attack and survival, Pfizer awards for Civil Defense work, report of hearing of the Hollifield committee, the wide range of radiation discussions. He said that bacterial and chemical warfare was not discussed as it had been covered in other conferences. It was asked that the Hollifield committee hearings be obtained and furnished members.

Vote of Thanks: On motion of Dr. Hungate, seconded by Dr. Watkins, it was voted to express thanks to the Council and to the Division of Health for the support the Committee had continuously received.

Civil Defense Meeting at M.U.: Dr. Siegel said that he would confer soon with Dean Wilson of the University of Missouri School of Medicine concerning a postgraduate educational meeting on Civil Defense, similar to the one held on April 6, 1961, and attempt to have this an annual conference.

Role of Physician: It was pointed out that the role of the physician in Civil Defense was set out in an AMA manual.

After discussion, on motion of Dr. Dowell, it was voted that the report be accepted but that in lieu of "Action" on page 35, that the Committee be requested to work with Dr. Hardwicke on a program of medical care aspects to be presented to the Council as early as possible.

### TREASURER'S REPORT

Dr. Doyle presented the Treasurer's report, which on his motion, duly seconded, was approved.

### BUDGET

Dr. Doyle presented the report of the Budget committee as follows:

| | |
|---|---|
| Salaries | $ 62,840.00 |
| Office Rent & Light | 4,700.00 |
| Postage | 4,000.00 |
| Prg. Staty. & Supplies | 4,500.00 |
| JOURNAL Expense | 41,500.00 |
| Telephone & Telegraph | 3,000.00 |
| Ins. Emp. Retire Plan | 7,187.00 |
| Professional Fees | 4,000.00 |
| Taxes Payroll | 2,000.00 |
| Travel Expense | 7,000.00 |
| Committees—Expenses | 53,550.00 |
| Furniture & Fixtures | 1,000.00 |
| General Expenses | 3,000.00 |
| Total | $198,077.00 |

After discussion of the deficit budget which the Committe had reported, on motion of Dr. Doyle, duly seconded, it was voted to recommend to the House of Delegates that dues be raised by $15.00 making a total of $50.00 retroactive to January 1, 1962, and that one half of the increase be allotted to the medical student loan fund, Missouri State Medical Foundation.

### FOUNDATION

On motion of Dr. Doyle, duly seconded, it was voted to transfer $25,000.00 from the general fund to the Missouri State Medical Foundation.

Dr. Wilson complimented the Council and the Association for its interest in medical education. He said that there were twice as many applicants for the medical school this year as there were last year, showing the increased interest in M.U. Medical School by both physicians and lay people who are influencing more and more students to apply for admission to the medical school.

### POSTGRADUATE PROGRAMS

Dr. Wilson said that the University of Missouri School of Medicine wished to continue and promote its postgraduate education and wanted to plan sessions a year in advance. He asked that a Committee of the Association work with the University in this planning and the Chairman asked the Committee on Scientific and Postgraduate Work to serve in this capacity.

### EDITOR

Dr. Doyle moved that he be relieved as Editor of MISSOURI MEDICINE and that Dr. Joseph V. Finnegan, St. Louis, be appointed in his place. On motion of Dr. Furlow, duly seconded, Dr. Doyle's resignation was accepted with regrets and Dr. Finnegan was appointed Editor.

### GROUP CORPORATION LAWS

Medical Group corporation laws (Kintner type legislation) were discussed by Mr. O'Brien, Dr. Wilson, Dr.

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Furlow, Dr. Rowlette and Dr. Ray D. Williams. It was stated that three applications for corporate charters have been submitted by Missouri doctors to the Secretary of State. The Attorney General has been asked for an opinion. Following discussion the Chairman referred the matter to the Committee on Corporate Practice for further clarification.

### COMMITTEE ON AGING

The report of the Committee on Aging was presented as follows:

Committee on Aging
Coronado Hotel, St. Louis
October 15, and November 12, 1961

*October 15, 1961*

Presiding: Stanley S. Peterson, M.D., Springfield, Chairman.

Present: Drs. Peterson; Ralph Perry and John A. Griffith, Kansas City; C. Thorpe Ray, Columbia; Robert C. Kingsland, Clayton; Robert H. Tanner, Jefferson City; R. O. Muether, St. Louis; J. H. Summers, Lebanon; Messrs. John Buckner, Springfield; Jordan Singleton, Lemoine Skinner, Gene Lunn, Thomas Fox, Ray McIntyre, T. R. O'Brien, and Miss Helen Penn, St. Louis.

Subcommittee on Income Maintenance: The hearings to be held in Missouri by the U. S. Senate Subcommittee on Income Maintenance were discussed. The schedule was given as:

Kansas City, December 6—"Federal and State Activity."
St. Louis, December 8—"Housing for the Elderly."
St. Joseph, December 11—"Retirement Income."
Springfield, December 12—"Nursing Homes."
Hannibal, December 13—"Retirement Income."
Cape Girardeau, Dec. 15—"Retirement Income."

Senator Ewdard V. Long will chairman the meetings and he has said that the morning sessions will probably be held to the subject assigned the specific conference, but that other subjects connected with problems of aging may be brought up in the afternoon sessions.

In discussion, it was brought out that representatives should be available at the conferences, even if time did not permit all to speak, that definite information and definite figures should be available to all who will appear.

The Committee on Aging held several meetings during the year.

Letter: A proposed letter to presidents of county societies in which hearings are scheduled was presented. On motion of Dr. Perry, seconded by Dr. Ray, the letter and the general plans were voted approval.

Meeting on November 12: It was decided that a meeting of all those who would be concerned with the hearings should be held for further discussion and it was decided to meet in St. Louis on November 12.

Publicity: The handling of publicity on the conferences was discussed and several means were suggested by Mr. Singleton. He and Mr. Skinner were asked to have costs available at the November 12 meeting.

*Meeting on November 12, 1961*

Present: Drs. Stanley S. Peterson, Springfield, Chairman; R. O. Muether, St. Louis; John A. Griffith and Ralph Perry, Kansas City; Robert C. Kingsland, Clayton; C. Thorpe Ray, Columbia, members of the Committee. In addition, the following attended the meeting: Drs. Richard M. Strong, Daniel B. Landau, Lysle M. Bach, Henry H. Sweets, Jr., Hannibal; J. S. Summers, Lebanon; Raymond A. Ritter, S. S. Barnes, Cape Girardeau; John R. Forgrave, Judson M. Hughes, St. Joseph; W. M. Kitchen, Kansas City; Don C. Weir, A. M. Repetto, St. Louis; Messrs. John R. Buckner, Springfield; Edward M. Hirsch, St. Joseph; Edgar Mothershead, St. Louis County; Hollister Smith, St. Louis; Frank Woolley, Chicago; Thomas P. Fox, Ray McIntyre, T. R. O'Brien, Lemoine Skinner, Jordan Singleton, Gene Lunn, St. Louis.

Purpose: Dr. Peterson pointed out that the purpose of the meeting was to make further plans on the conferences to be held in the state by the Subcommittee of the Senate Subcommittee on Income Maintenance (McNamara Committee on Aging).

Fact Sheets: Fact sheets were presented on "National Health Care Data," "Missouri Over-65 Population Characteristics," "Prepaid Health Insurance Data," "Missouri Nursing Home Data," "Missouri Hospitals," "Missouri Vendor Program," "Kerr-Mills Law," "King-Anderson Bills," "MSMA Public Service Activities," and "Possible Topics for Inclusion in Testimony of County Medical Society Spokesmen."

In discussion it was brought out that each statement by a county society would differ, according to conditions in that locality. It was pointed out that it was not known just how the meetings would be conducted and whether or not the subject of each meeting would be adhered to.

It was asked that a suggested statement or outline be furnished each county prior to the meeting and Mr. O'Brien said that this would be done as well as having a member of the Association staff present at the meetings.

Statements: It was asked that statements to be presented be sent to the Association office prior to the time of the presentation.

Publicity: Publicity on the meetings was discussed. After discussion, on motion of Dr. Perry, it was voted to recommend to the Council that approximately $1,000 be made available for reporting of the meeting.

Witnesses: The following physicians to be spokesmen at the meetings were designated: Dr. Ralph Perry, for Kansas City; Dr. Furlow or Dr. Repetto for St. Louis City; Dr. Charles Miller for St. Louis County; Dr. Fisher for St. Joseph; Dr. John P. Ferguson for Springfield; Dr. Sweets for Hannibal, and Dr. Ritter for Cape Girardeau.

Lay Personnel: The counties involved were asked to

Diet patients welcome appetizing dishes like these.

How to help your patient stick to a bland diet

The secret ingredient in a successful diet is acceptance. How much easier it is for the patient to stay with a bland diet if it includes an appealing variety of dishes like these that please the eye as well as the palate.

Pictured is an extremely appetizing and well-rounded bland diet meal: tender broiled meat patties made with crushed corn flakes and water, flavored with salt and a touch of thyme, tender peas and carrots mixed, and buttered baked potato.

For color there's molded gelatin salad and a pretty-as-a-picture dessert: lime gelatin whipped with applesauce and topped with custard sauce.

United States Brewers Association, Inc.

For reprints of this and 11 other diet menus, write us at 535 Fifth Avenue, N.Y. 17, N.Y.

*A glass of beer can add zest to a patient's diet*

pH 4.3
(Average of American Beers)

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give the names of lay people who would ask for time at the conferences to the Association office.

White House Conference on Aging, St. Louis, Nov. 7, 1961: A summary was presented of the White House Conference on Aging in St. Louis, November 7. A wind-up story about the Conference, written by Marsh Clark of the *St. Louis Globe-Democrat* is attached.

St. Louis *Globe-Democrat*
November 10, 1961

### "SPEAKING OF POLITICS"

### "WORDS CAN'T DESCRIBE WHITE HOUSE PARLEY"

By MARSH CLARK
*Globe-Democrat* Political Editor

"The pursuit and capture of descriptive adjectives is the way writers make a living, but they would all go broke if they had to depend full-time on covering such wanting dull events as this week's White House Regional Conference here.

"The conference had a peculiar and nebulous quality that made it difficult to describe. About the best adjective the writer could apply to it would be 'bla,' although he would have to strain himself a bit to be that chivalrous.

"The conference was attended by a veritable legion of federal government officials from Washington, D. C., and it occasioned the amount of long-winded talk you might expect from anyone who came such a long way.

#### "PARTY VIEWS

"The Republicans criticized the conference in numerous press releases, saying it was merely a device used by the Kennedy administration to propagandize its program. The Democrats defended it, naturally, stating they were anxious to feel the public pulse, walk barefooted over the grass-roots, refresh themselves at the public fountainhead, et cetera.

"During breaks in the conference, newsmen talked in the corridors of Kiel Auditorium rather disconsolately trying to locate an adjective or two to properly describe the proceedings.

"This much can be said: If the administration intended to use the conference as a means of brain-washing the public to any great extent, it failed.

"If it intended to evoke an outpouring of public testimony on domestic problems, it failed too.

#### "MEETING DISJOINTED

"The conference was so disjointed in presentation that its point was lost, either in the hurricane of speeches or somewhere beneath the mountain of literature distributed.

"In the course of two short afternoons (with most of that time shot by the speechifying), the conference attempted to discuss almost every domestic issue of any consequence.

"There were panels of federal experts operating simultaneously in almost every cubbyhole in Kiel. In some rooms, the panel members seemed to outnumber the audience. In every room, the panel members found it necessary to deliver themselves of speeches concerning the federal programs within their area of responsibility.

"After they had finished speaking, the sessions were opened for questions in the short time remaining. But no effort was made to schedule the questions. The result was that many questioners made little speeches of their own or wandered far afield from the particular domestic problem their panel was supposed to solve.

"With rare exceptions, there were no give-and-take discussions. If the panel members go back to Washington and attempt to report to President Kennedy on what people at the grass roots are thinking, they had better know how to write fiction.

#### "SUBSTANCE OF QUESTIONS

"On one occasion, a prominent St. Louis County doctor tried to interrogate the panel members and the substance of his questions made it plain he was opposed to the Kennedy administration's program in that particular field.

"He was summarily and rudely cut off and his question left unanswered.

"On another occasion, a questioner was told by a Washington official 'write me a letter about that one,' hardly the way to bring about a free exchange of ideas on current topics.

**Dr. Summers presented the gavel to Dr. Dowell at the Annual Banquet.**

"Nobody would agree with the conference if, indeed, it was designed to get Washington officials away from their desks and give them an opportunity to listen to the people.

"But as soon as any element of propagandizing enters into it, such a conference is removed from the holy, bi-partisan atmosphere with which its sponsors tried to surround it.

"Of the fact that there was a certain amount of propagandizing on behalf of the administration there can be no serious question.

"Indeed, this was frankly admitted in so many words by Jack T. Conway, a federal official who made the keynote speech.

"Referring to President Kennedy's campaign pledge to 'get this country moving again,' Mr. Conway said he and others have been working day and night since January to 'get this country moving again' and came to tell St. Louis all about it.

"Health, Education and Welfare Secretary Ribicoff made three speeches during the conference and two of them were pleas for public support of two pet Kennedy projects—federal aid to education and medical care for aged persons under Social Security.

"And of the fact that the conference failed to provide the Washington road show with any significant amount of grassroots sentiment there can also be no serious question.

"The speakers should have taken a cue from last year's Democratic National Committee platform hearings, one of which was held here. The sessions lasted more than a couple hours and there was a minimum of filibustering by the panel members.

"Witnesses were scheduled in advance. There were experts by the dozens and there were plain old people off the street and all got a chance to say something. Information flowed from the public to the panel, not from the panel to the public. The Democratic National Committee picked up the tab, in refreshing contrasts to this week's conference.

### "CONFERENCE ENDS

"Anyway, the conference broke up here this week and the participants left town, some late Wednesday, some early Thursday, riding away to the airport, some of them in city Fire Department cars.

"Perhaps the most appropriate thing said at the conference was uttered by Commerce Secretary Hodges, in acknowledging his gracious introduction by Governor Dalton at the concluding session. What he said might apply to the conference itself.

"When he was working his way through school, he recounted he was waiting on tables and served up some piping hot porridge to a table. One student put the hot cereal in his mouth, then spat it out, spraying the stuff all over.

"Unabashed by his act, the student turned to young Hodges and exclaimed:

" 'You know, some damn fools would have swallowed that stuff.' "

Following this report, the hearings on Aging of the U. S. Senate Special Committee to be held early in December, with Senator Edward V. Long as Chairman, were discussed. Mr. Woolley reported on various AMA activities and said that he would attend a hearing in Minneapolis just prior to the hearing in Kansas City, at which he would be present.

On motion of Dr. Stuart, duly seconded, the Committee report was accepted, with the exception of the portion dealing with publicity handling of the hearings.

### ANNUAL SESSION PROGRAM

Dr. Matthews presented the program for the 1962 Annual Session. The program for Wednesday morning which was planned to be a politico-socio-economic presentation was discussed. It was decided that this type of program would be announced but that details would be worked out later so that it could be more timely for the Annual Session. It was decided that presidents and secretaries of component medical societies and new members would be entertained on Sunday evening in a similar manner as was done in 1961.

### COMMITTEE ON TUBERCULOSIS

Dr. MacInnis presented the report of the Committee on Tuberculosis as follows:

Committee on Tuberculosis
Missouri Hotel, Jefferson City
October 1, 1961

Presiding: Florence E. MacInnis, M.D., Kansas City, Chairman.

Present: Drs. MacInnis; Paul Murphy, St. Louis; Joseph L. Lucido, St. Louis; David N. Kerr, St. Louis, of the Committee; representing the Division of Health were Drs. C. W. Meinershagen and E. A. Belden, Jefferson City; representing the Missouri Tuberculosis Association were Drs. J. C. Murphy, St. Louis; Thelma C. Buckthorpe, Sikeston; Charles A. Brasher and George H. Hobbs, Mount Vernon; E. E. Glenn, Forsyth; Miss Inez Moore, Liberty; Donald Pratt, St. Louis; Mr. Ray McIntyre and Miss Helen Penn, St. Louis, of the Missouri State Medical Association.

H. B. 83: Dr. MacInnis read H. B. 83, as follows:

"AN ACT

"Relating to compulsory isolation of recalcitrant tuberculosis patients.

"Section 1. The following definitions shall apply to the words used in this act:

"(1) 'Communicable tuberculosis' means tuberculosis manifested by a laboratory report of suptum or other body fluid or excretion found to contain tubercle bacilli. Such finding shall be considered evidence of communicable tuberculosis for a period of at least three months and thereafter until three successive concentrated twenty-four hour specimens collected at weekly intervals are found to contain no tubercle bacilli.

"(2) 'Local Board' means any legally constituted local city or county board of health or health center board of trustees or the director of health of the city of Kansas City or the commissioner of health of the city of St. Louis, or in the absence of such board, the county court or county commissioners of any county.

"Section 2. When a person with communicable tuberculosis violates the rules, regulations, or orders promulgated by the division of health, and is thereby conducting himself so as to expose other persons to danger of infection, after having been directed by the local board to comply with such rules, regulations or orders, the local board may institute proceedings by petition, for commitment, returnable to the circuit court of the county in which such person resides, or if the person be a non-resident or has no fixed place of abode, then in the county in which the person is found. Strictness of pleading shall not be required and a general allegation that the public health requires commitment of the person named therein shall be sufficient.

"Section 3. Upon filing of the petition, the court shall set the matter down for a hearing either during term time or in vacation, which time shall be not less than five days nor more than fifteen days subsequent to filing. A copy of the petition together with summons stating the time and place of hearing shall be served upon the person three days or more prior to the time set for the hearing. Any x-ray picture and report of any written report relating to sputum examinations certified by the division of health shall be admissible in evidence without the necessity of the personal testimony of the person or persons making the examination and report.

"2. The prosecuting attorney or the city attorney shall act as legal counsel for their respective local boards in this proceeding and such authority is hereby granted. The court shall appoint legal counsel for the individual named in the petition if requested to do so if such individual is unable to employ counsel.

"3. All court costs incurred in proceedings under this act, including examinations required by order of the court but excluding examinations procured by the

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1. Councilors Furlow, Whitener, English, Stricker, and McCraw.
2. President-Elect Hollweg and President Dowell.
3. Fifty year men who received pins at Annual Banquet.
4. Councilors Barger, Stuart, Rowlette, Benoit and Fisher.
5. Dr. Edward R. Annis was the Banquet speaker.
6. President Summers presided at the Banquet.
7. Officers of the Association, local medical societies and the Woman's Auxiliary were seated at the head tables.
8. Dr. Dowell received the gavel from Dr. Summers.
9. The banquet was well attended.

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A panel on "Obstetric Hemorrhage and Shock" was a part of the program.

person named in the petition, shall be borne by the county in which the proceedings are brought.

"4. Summons shall be served by the sheriff of the county in which proceedings under this act are initiated and return thereof shall be made as in other civil cases.

"Section 4. Upon the hearing set in the order, the individual named in the order shall have a right to be represented by counsel, to confront and cross-examine witnesses against him, and to have compulsory process for the securing of witnesses and evidence in his own behalf. The court may in its discretion call and examine witnesses and secure the production of evidence in addition to that adduced by the parties; such additional witnesses being subject to cross-examination by either or both parties. Upon a consideration of the petition and evidence, if the court finds that the person named in the petition has communicable tuberculosis and conducts himself so as to be a danger to the public health, an order shall be issued committing the individual named in the petition to the Missouri State Sanatorium and directing the sheriff to take him into custody and deliver him to the sanatorium. If the court does not so find, the petition shall be dismissed. The cost of transporting such person to the Missouri State Sanatorium shall be paid out of general county funds.

"Section 5. The order shall be subject to review at the instance of either party, as in other civil cases.

"Section 6. Upon commitment, the patient shall be confined in the Missouri State Sanatorium until such time as the superintendent determines that the patient no longer has communicable tuberculosis or that his discharge will not endanger public health.

"Section 7. Any time after commitment, the patient or any friend or relative having reason to believe that such patient no longer has contagious tuberculosis or that his discharge will not endanger public health, may institute proceedings by petition, in the circuit court of the county wherein the confinement exists, whereupon the court shall set the matter down for a hearing before him within fifteen days requiring the person or persons to whose care the patient was committed to show cause on a day certain why the patient should not be released. The court shall also require that the patient be allowed the right to be examined prior to the hearing by a licensed physician of his own choice, if so desired and at his own personal expense. Thereafter all proceedings shall be conducted the same as on proceedings for commitment with the right of appeal by either party as herein provided; provided, however, such petition for discharge shall not be brought or renewed oftener than once every six months.

"Section 8. No person having communicable tuberculosis who is in his home or other place and obeys the rules and regulations of the division of health for the control of tuberculosis or who voluntarily accepts care in a tuberculosis institution, sanatorium, hospital or home, or other place and obeys the rules and regulations of the division of health for the control of contagious tuberculosis shall be committed under the provisions of this act.

"Section 9. No person committed to the Missouri State Sanatorium under this act shall be required to submit to medical or surgical treatment without his consent, or, if incompetent, without the consent of his legal guardian, or, if a minor, without the consent of a parent or next of kin.

"Section 10. The expenses incurred in the care, maintenance, and treatment of patients committed to the Missouri State Sanatorium under provisions of this act shall be paid from state funds appropriated for the maintenance and operation of the Missouri State Sanatorium.

"Section 11. The division of health shall provide such facilities at the Missouri State Sanatorium as are necessary to carry out the provisions of this act and may employ personnel as is necessary for the operation of such facilities."

Discussion: It was pointed out that this type of bill had been introduced about four sessions prior to the last Assembly, and that it would now become law on October 13. The necessity of state laboratory doing all the work was questioned and it was felt that this would probably be true except in cases where there was a public health laboratory. Whether it was mandatory that all patients go to the state sanatorium was questioned. It was pointed out that no appropriation accompanied the bill, that the Division of Health did not have funds to implement it, and it was decided that the bill probably would not be implemented greatly except in counties where there are health departments. Dr. Belden said that he would send out information about the law to public health agencies. Dr. Brasher discussed what would be necessary in remodeling and finances in order to handle these patients at the sanatorium.

Letter to Patients: Dr. Belden presented a suggested letter to go to patients to whom the law would apply, outlining the procedure of isolation in the home, or urging application for admission to a tuberculosis hospital, the letter to be signed by a health officer of a court.

Action: On motion of Dr. Paul Murphy, it was voted that the Division of Health announce the passage of the law, together with rules and regulations when established, in Missouri Medicine.

Prophylactic Treatment: Dr. Brasher discussed briefly work that is being done as prophylactic treatment for tuberculosis.

Drugs: Dr. Meinershagen presented the policies in effect at present concerning the Division of Health's program of tuberculosis drugs for treatment, as follow:

"1. The Section of Local Health Services supply the following drugs:

"Streptomycin (SM) 5 gm. vials. Isoniazid (INH)

100 mg. tablets in bottles of 1,000. Isoniazid (INH) 50 mg. tablets in bottles of 1,000.

"Sodium para-aminosalicylic acid (NaPAS) 500 mg. tablets in bottles of 1,000. Calcium para-aminosalicylic acid (CaPAS) 500 mg. tablets in bottles of 1,000. Potassium para-aminosalicylic acid (KPAS) 500 mg. tablets in bottles of 1,000.

"2. No restriction is placed on financial status of patient receiving drugs.

"3. The patient must be discharged from a tuberculosis hospital and under the medical care of a local physician.

"The discharge need not necessarily be medical but patients discharged A.M.A. should be encouraged to return to the hospital.

"4. A prescription from the patient's doctor should be presented for *each* supply of drugs issued. Prescriptions should be kept on file in the health office dispensing the drugs.

"5. A 60-day supply is recommended issue at one time, but *no more* than a 90-day supply may be issued at one time.

"This requires the patient to visit the doctor at least every 3 months to secure a new prescription and be rechecked.

"6. If the patient continues on drugs longer than one year the health office should request a statement from the patient's physician, confirming the need of future drug treatment.

"A drug book may be set up in each district and local office to keep a record of drugs dispensed, to whom dispensed, and the amount.

"The cost of tuberculosis drugs is very high. It is hoped that each office dispensing drugs will use discretion in the amounts and to whom dispensed, even though there are no official restrictions placed on this program.

"Addition: In regard to prophylactic treatment, it was suggested that the following should be added to present policy:

"Drugs for the treatment of tuberculosis are provided to make it possible for the indigent and medically indigent to continue the chemotherapy started in the sanatorium.

"It is possible to discharge patients earlier from expensive hospital care where there is assurance that definitive tuberculosis therapy can be continued in the home.

"INH is not expensive—10 cents per day is about the average cost of this drug. The group suggested this fact should be made known to physicians.

"Drugs will be provided to all household contacts to a known active case of tuberculosis who are under three years of age.

"Recent converters to tuberculin and other household contacts of known active cases particularly individuals with large reactions to the tuberculin test may be supplied with tuberculosis chemotherapy on the request and prescription of the attending physician.

"All reported and proven active cases of tuberculosis on prescription of the attending physician will be supplied with tuberculosis chemotherapy."

Following discussion, on motion of Dr. Fisher, duly seconded, the report was accepted.

### MEMBERSHIP

The problem of state association membership of physicians living or having offices in other states (particularly Jackson County and counties in Kansas) was discussed. It was decided that the Chairman should appoint a committee to work with members of the Council of the Kansas State Medical Society to try and work out the problem and that if that failed, it should be referred to the AMA Judicial Council.

### INSURANCE

It was announced that two insurance companies wished to make accident and sickness insurance available to physicians and their employees. On motion of Dr. Dowell, duly seconded, the Executive Secretary was asked to advise the America Fore Group that their proposal to provide weekly sickness and accident benefits to the employees of Missouri physicians is accepted.

**The handicapped child in Missouri was discussed during the meeting.**

The second proposal to provide accidental death benefits in large limits for members and their spouses was considered. On motion of Dr. Dowell, duly seconded, the Secretary was instructed to examine the differences in two separate proposals and to obtain the one which offers the best buy for the members.

### AMA CLINICAL SESSION

Dr. Hollweg said that Kansas City and the Jackson County Medical Society would like to invite the AMA to hold a clinical session in Kansas City, and on motion of Dr. Whitener, duly seconded, it was voted that the Association write the A.M.A. on their behalf.

### A.M.P.A.C.

A.M.P.A.C., The American Medical Political Action Committee, an organization totally separate from the AMA and organized for political action was discussed. The Chairman appointed Drs. Summers, Dowell and Furlow to make further study and report to the Council.

### NEXT MEETING

It was decided that the next meeting of the Council would be held January 20 and 21, 1962, in St. Louis.

KENNETH C. HOLLWEG, M.D., *Chairman*

The Speaker referred the report of the Council, with the exception of matters relating to the Missouri State Medical Foundation, Public Service, Dues Increase, AMA Over 65 Plan and St. Louis Blue Shield to the Reference Committee on Reports of Officers, the mat-

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ters named being referred to the Reference Committee on Miscellaneous Affairs.

The Speaker made the same referral of the Report of the Council meeting of January 20-21, 1962, which appeared in the Handbook as follows:

### Meeting of January 20-21, 1962

The Council met at Hotal Chase, St. Louis, January 20, 21, 1962, with Kenneth C. Hollweg, M.D., Kansas City, Chairman, presiding. Those present were Drs. Hollweg; Joseph L. Fisher, St. Joseph; Leonard T. Furlow, St. Louis; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; J. H. Summers, Lebanon; Donald M. Dowell, Chillicothe; John I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; Vernon E. Wilson, Columbia; Guy N. Magness, University City; A. C. Trueblood, St. Louis; Joseph V. Finnegan, St. Louis; Messrs. John Buckner, Springfield; Hollister Smith, Edgar Mothershead, Gene Lunn, Jordan Singleton, Tom Fox, Tom R. O'Brien, Ray McIntyre, and Helen Penn, St. Louis.

#### MEDICARE

Mr. O'Brien read a letter from the office of Medicare written on the sixth anniversary of Medicare and thanking the Association for its cooperation.

#### AGING

It was reported that the report of the Committee on Aging will appear in the Reports of Officers and Committees. The conferences on aging in Missouri conducted by Senator Edward V. Long were reviewed and various conferences were reported on by several Councilors.

#### MEETINGS

Mr. McIntyre reported several outstanding meetings of component societies, a Blue Shield program in Jefferson County, Christmas programs and meetings by Grand River and West Central societies, Jackson County with Congressman Durward G. Hall as speaker, installation meetings of St. Louis Medical and St. Louis County Medical Societies, Buchanan County with a candidate for the U. S. Senate as speaker, a CPC at Sedalia. He announced a seminar in surgery to be held at the University of Missouri on January 25, installation meeting of the Greene County Medical Society on January 31, and a meeting of the 5th Councilor District at Columbia on February 1.

#### MISSOURI STATE MEDICAL FOUNDATION

Attention was called to the time of meeting of the Foundation at the time of the Annual Session. It will follow immediately the meeting of the House of Delegates on Monday afternoon. Board of Trustee members to fill expired terms must be elected, and the Board of Trustees must elect officers. It was pointed out that a Committee of the Board passes upon all applications for loans.

A review of the work of the Foundation was presented and it was reported that there are now 34 applications pending, amounting to $15,950.00.

It was suggested that a brochure be prepared to go with the loans when they are made, pointing out the work of the Association and its sponsorship of the Foundation. On motion of Dr. Dowell, it was voted that such a brochure be prepared and used.

It was announced that work was progressing in getting the Internal Revenue Service to declare donations to the Foundation deductible and that probably a ruling would be had by the time of the Annual Session.

#### AMA

Dr. Magness reported briefly on the Clinical Session of the AMA referring to the report which appeared in the January issue of Missouri Medicine. A discussion on Hospital Accreditation followed.

#### AMERICAN HOSPITAL ASSOCIATION ACTION

The following policy statement of the American Hospital Association on Eldercare, as transmitted to the Washington offices of the American Hospital Association on January 5, 1962, from the Chicago headquarters office, was presented:

"1. We reaffirm the crucial need to continue vigorous efforts to foster realistic and equitable programs in every state for the adequate health protection of the indigent and medically indigent under a mechanism similar to the Kerr-Mills act.

"(It was understood that to improve the effectiveness of state programs under the Kerr-Mills Act, more attention must be placed on adequate reimbursements to participating hospitals and other health care institutions.)

"2. We recommend the earliest possible implementation of a national Blue Cross program for a voluntary, nonprofit plan available to all persons aged 65 and over.

"3. We recognize that government assistance is necessary to effectively implement this national Blue Cross proposal in order to enable many retired aged persons to purchase this health protection through the voluntary prepayment system. Conditional upon the administration of this proposed plan by the voluntary nonprofit prepayment system, the tax source of the funds is of secondary importance to us.

"(The last sentence of the above statement was interpreted to mean that the source of funds is of secondary importance to us provided the proposed plan is administered by the voluntary nonprofit prepayment system and not by the Social Security Administration.)

"4. The individual aged person should receive governmental financial assistance on a decreasing scale related to income, the low income person to receive major, or even total assistance, and the higher income person to receive less. The determination for government assistance should be made in accordance with current income reported for federal income tax purposes or, if this is not possible, some legally acceptable declaration of income.

**The Committee on Maternal Welfare held a luncheon meeting on Monday of the Session.**

The Milibis® vaginal suppository is soft and pliant as a tampon. It offers proved therapeutic action* in an exceptional vehicle. The suppository is clean, odorless and non-staining. The course of treatment of vaginitis (trichomonal, bacterial and monilial) with Milibis is short — only 10 suppositories in most cases. Milibis® vaginal suppositories are supplied in boxes of 10 with applicator.

Winthrop LABORATORIES
New York 18, N. Y.

*97 per cent effective in a study of 564 cases;
94 per cent effective in a study of 510 cases.

Milibis (brand of glycobiarsol),

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The determination should not be made in accordance with the usual means test determinations made under public welfare programs.

"5. We emphasize the urgency and importance of planning for the provision of adequate facilities and personnel in order that skills and services may be available to render high quality care to the aged.

"6. It is the sense of this meeting of the House of Delegates of the American Hospital Association that the best interests of the retired aged will not be served by passage of the King-Anderson bill. Our opposition to this bill is based upon careful study of the needs of the retired aged and over-all economic effect of such a program. We believe that the retired aged will be better served by a program such as has been proposed by Blue Cross Plans."

It was pointed out that the two Missouri Hospital Association representatives voted against any social security subsidy.

On motion of Dr. Fisher, duly seconded, it was voted to send a letter to them, commending them for their position.

### ST. LOUIS BLUE SHIELD

Information and a resolution regarding the St. Louis Blue Shield Plan were submitted as follows:

For more than six years, the automobile industry has had labor contracts with its employees calling for paid-in-full hospital and medical-surgical benefits for workers earning $7,500 a year or less.

During this time, the companies have depended upon Blue Cross and Blue Shield for such protection. In indemnity areas such as St. Louis Blue Shield, however, full payment benefits have not been available.

In the 1961 contract negotiations the automobile companies agreed to pay the full cost of health protection for their employees. Together, they are now making an insistent effort to obtain full coverage protection and the predictability of medical costs which this affords. (Many other prominent groups also have expressed strong desires for this kind of coverage through the years.)

In October of 1961, St. Louis Blue Shield executives were told by officers of the General Motors, Ford and Chrysler companies that unless the Plan could furnish a full-payment program early in 1962 the automobile industry memberships would be withdrawn. In this connection, the automobile company Blue Shield memberships in Illinois and Ohio have already been cancelled and replaced by a special experimental commercial insurance company program.

There are some 55,000 automotive workers and their dependents enrolled in St. Louis Blue Shield. This is the largest group in the Plan, constituting almost 9 per cent of the total enrollment. Needless to say, loss of this group would have serious adverse effects on the Plan.

In this situation, however, Blue Shield has not advocated any particular course. Instead, it has attempted to determine the attitude of the medical profession and be guided by physician opinion.

At a meeting of the Blue Shield—County Medical Societies Liaison Committee in November, to which the presidents of all local medical societies in the St. Louis Plan area were invited, Blue Shield was asked to present the problem to local societies for their recommendations as to whether a specific indemnity—full-coverage program should be developed and submitted to the physicians of the area for their approval or disapproval.

On the basis of the response of this query—15 of the 16 societies replying recommended development of a specific program for the consideration of physicians—the Board of Trustees of St. Louis Blue Shield has directed the development of such a proposal, and work is now under way.

These steps have been reported to the automobile companies, and they have agreed to delay cancellation of their groups for a limited time, meanwhile accepting an improved indemnity program for the interim.

The Council believes that the Trustees, Officers and Staff of St. Louis Blue Shield are to be commended on the manner they have proceeded in this matter. At the same time, it believes the Plan, which was formed and has continued under the sponsorship of the Missouri State Medical Association, deserves a clear statement of the position of the House of Delegates on the principle of a full-payment program. In the Council's judgment, the time has come when the medical profession of Missouri must decide whether or not it favors or is unalterably opposed to full-payment or service benefits programs for the St. Louis Blue Shield Plan.

The Council therefore proposes the following resolution:

*Resolved,* That the House of Delegates of the Missouri State Medical Association hereby approves and encourages the development of a specific and detailed combination indemnity-full coverage program by the St. Louis Blue Shield Plan for submission to the physicians of its area for their consideration.

On motion of Dr. Stuart, duly seconded, the information and resolution were approved for submission to the House of Delegates in the Delegates Handbook.

### AMA-BLUE SHIELD PLAN

A telegram from AMA and a release from the AMA regarding a new program for the elderly were presented. The telegram follows:

The AMA Board of Trustees, meeting January 12, adopted the following statement:

In December 1958 a policy adopted by the AMA House of Delegates recommended that physicians "expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income," and "that physicians agree to accept a level of compensation for medical services rendered to this group, which will permit the development of such insurance and prepayment plans at a reduced premium rate."

"The Board of Trustees believes that a plan proposed by Blue Shield for National Coverage of Physicians' Services for those over 65 under certain income limits conforms with the spirit of this policy. The Board of Trustees recommends that the constituent medical associations take such action as is necessary to cooperate with the proposed Blue Shield Plan, and applauds this effort by the Blue Shield. Details of the Blue Shield program will be released to the press in a joint statement by the AMA and Blue Shield Thursday afternoon, January 18. It is urged, therefore, that nothing be mentioned to your local press until that time."

F. J. L. Blasingame, M.D.,
American Medical Association

On motion of Dr. Stuart, duly seconded, it was voted that the Council recommend to the House of Delegates that it go on record as approving in principle the proposed plan of the A.M.A. and Blue Shield for the over 65 group and request the two Blue Shield plans in Missouri to proceed with the development of specific programs as soon as possible for submission to the members of the Association for their consideration.

### COMMITTEE ON MATERNAL WELFARE

Dr. Trueblood presented the report of the Committee on Maternal Welfare. (The report appears in the Reports of Officers and Committees. See page 592.)

On motion of Dr. Fisher, duly seconded, the report was accepted with revision of the last paragraph concerning confidentiality legislation, to include "if and when feasible."

### TREASURER'S REPORT

Dr. Doyle presented the Treasurer's report and pointed out that the need for more funds was clearly shown by the report.

On motion of Dr. Furlow, duly seconded, the report was accepted.

### COMMITTEE ON MEDICAL ECONOMICS

It was announced that the report of the Committee on Medical Economics will appear in the Delegate's Handbook. It was reported that data on costs of care of the "needy" and "near needy," which the Committee was to obtain, had not been made available as yet but would be soon.

On motion of Dr. Furlow, duly seconded, the inclusion of the report in the Delegate's Handbook was approved.

### CAMPAIGN AGAINST H.R. 4222

A letter from Dr. Blasingame asking that a campaign against H.R. 4222 be carried out in the state to obtain letters and resolutions was read, together with listings of organizations in the state and the stand they had taken on similar legislation. It was indicated in the material that the AMA would pay the expenses of such a campaign. It was decided that billing to the AMA should be on a cost basis as the campaign progressed rather than estimating any amount. It was announced that there would be a meeting on legislation at the AMA during the following week and it could be determined at that time if this financial arrangement would be satisfactory.

### COUNCILOR DISTRICT SET-UP

It was called to the attention of the Council that the following amendment to the Constitution would come up for action at the coming meeting of the House of Delegates:

"Change Article VII, Section 1, after '. . . and a Vice Speaker of the House of Delegates and 10 Councilors selected as provided for.' to read 'and a Vice Speaker of the House of Delegates and 11 Councilors selected as provided for.'"

### COMMITTEE ON PUBLIC SERVICE

The report of the Committee on Public Service was reviewed and approved for inclusion in the Handbook. Following discussion, on motion of Dr. Stuart, duly seconded, it was voted that an amendment to the By-Laws be submitted to the House to abolish the committees on Public Policy and Public Relations and on Health and Public Instruction and make the Committee on Public Service a standing committee. It was agreed that this proposed amendment should appear in the Delegate's Handbook.

### HANDBOOK

The following items to appear in the Handbook were read:

1. General Section
2. Special Report—Student Loan Fund (Board of Trustees) including notification of Trustees election Monday afternoon
3. Report of the Public Service Committee (Council) including recommendation for change in By-Laws to establish Public Service Committee as permanent standing committee, absorbing the Committees on Public Policy and Public Relations and on Health and Public Instruction
4. Dues (Council)
5. Report of Committee on Medical Economics
6. AMA-National Blue Shield Over 65 Plan
7. St. Louis Blue Shield Full Coverage Proposal (Council)
8. Councilor Districts (Old Business)
9. Council Minutes—January 20-21 (Council)
10. Financial Statement

### ANNUAL SESSION

Dr. Matthews reviewed the program for the Annual Session, giving additions which had been made since the Preliminary Program had been printed. He called special attention to the many specialty groups which were taking part in the program and having dinner meetings of their own.

### COMMITTEE ON MENTAL HEALTH

The Council received the report of the Committee on Mental Health. (The report appears in the Reports of Officers and Committees. See page 590.)

On motion of Dr. Furlow, duly seconded, the report of the meeting on July 9 was accepted with the exception of the "Statement of Position and Recommendations of the American Psychiatric Association" since the Council did not feel that it was within its province to pass on such a specialized statement.

On motion of Dr. Stuart, duly seconded, the minutes of the meeting of November 5 were accepted.

### AMPAC

The purposes and working of AMPAC were discussed. On motion of Dr. Fisher, duly seconded, a resolution regarding AMPAC was adopted, as follows:

#### RESOLUTION

Whereas, American medicine is faced today with ever increasing political activity directed toward establishing some form of a federally controlled medical program, and

Whereas, Local and state groups of physicians, separate in organization from their respective medical associations; banded together locally to resist that effort find themselves woefully inadequate to enlist effectively activity by all physicians and woefully inadequate to present their attitudes on a level competitive with the opposition, and

Whereas, It is recognized that even though the American Medical Association and several State Medical Associations are conducting accelerated public educational programs, the local instrumentation of political activity needs strengthening; therefore be it

*Resolved*, That the Missouri State Medical Association does hereby endorse and approve the formation af a Missouri State Political Action Committee and urges all physicians and their families in the State of Missouri to join, support, contribute to, and work toward the success of the organization and its objectives; and be it further

*Resolved*, That in view of the national and federal aspects of many political issues, political education, and effective political action, the Missouri State Medical Association does hereby endorse and approve the American Medical Political Action Committee and urges all physicians of this State to join, support, contribute to, and work toward the success of AMPAC and its objectives; and be it further

*Resolved*, That the Missouri State Medical Association does hereby urge the Missouri State group when formed, and the American Medical Political Action Committee to work together and to cooperate to the greatest extent possible so as to accomplish in the most effective manner, the political aims and objectives of the physicians of this state and of this country for the greater benefit of medicine, the public health and all our citizens.

### COMMITTEE ON VENEREAL DISEASE

The report of the Committee on Venereal Disease was presented. After discussion, on motion of Dr. Fisher, duly seconded, the report was referred back to the Committee for further study and legal advice on the question of confidentiality and privileged communication.

### DR. SUMMERS

Dr. Summers spoke briefly thanking the Councilors for their support during his presidency and stressing the need for leadership by the Councilors and Officers of the Association.

Kenneth C. Hollweg, M.D., *Chairman*

The following report of the Council on the Report of the Special Committee on Public Service appeared in the Handbook as follows:

## REPORT OF THE SPECIAL COUNCIL COMMITTEE ON PUBLIC SERVICE

In order to present a clear picture of the extensive effort devoted by the Association to its Public Service activities during the year in this account, the Committee has included portions of its report made to the Council in September and published in the minutes of the Council meeting of September 16-17, 1961. In addition, we have included mention of the activities of several other of the Association's committees which have rendered invaluable assistance in the Public Service program in the past year.

### MSMA's 1961 TRIPLE POINT PUBLIC SERVICE PROGRAM

Following resolutions passed at the 1961 MSMA House of Delegates meeting, the Council approved the 1961 Triple Point Public Service Program at its May 20 meeting.

The Chase
HOTEL
ST. LOUIS

**Drs. Neal and Lewis were honored at the University of Missouri Alumni luncheon meeting.**

The Triple Point Program is a broad plan for state association, local society and individual physician action to:

1. Implement the Kerr-Mills Law in Missouri
2. Effectively oppose the King-Anderson proposals in Congress
3. Institute local action programs in each county society to provide the real and long-term solutions to problems of health care.

The objective of the program is to find solutions to any existing problems of financing health care without interference of a compulsory federal socialized medicine scheme and to demonstrate the interest of the medical profession and its ability to fill the needs on a private, free-enterprise basis.

### GENERAL MOBILIZATION

Immediately after the House of Delegates meeting in March 1961, letters were sent to all local medical societies reporting on the actions of the House.

Shortly thereafter, letters were sent to all societies outlining plans for the 1961 Public Service Program, and requesting appointment of local committees to implement the program.

A similar letter was sent to the state Woman's Auxiliary outlining plans and requesting that they organize for support.

Mr. William Brennan, on loan from St. Louis Blue Shield, was appointed on a temporary basis as program coordinator in the MSMA office for a 60 day period. (With the appointment of Mr. Tom Fox to the permanent MSMA staff, Mr. Brennan has returned to Blue Shield.)

Various letters and bulletins on other phases of the program have served to promote local organization and activity since the Annual Session, as detailed elsewhere in this report. The objective throughout the year has been to provide background and support to the county societies and the Auxiliary so that they, along with the state Association, will be organized for effective opposition to King-Anderson in the 1962 Congressional session, for assistance in implementing Kerr-Mills in Missouri in 1963, and for initiating needed local action projects.

### KERR-MILLS IMPLEMENTATION

During the period from the end of the MSMA Annual Session, March 22, to June 15, when the Missouri legislature adjourned, a major Public Service Program activity of the Association was the effort to implement the Kerr-Mills law in Missouri.

March 23—News story on endorsement of Kerr-Mills principle by House of Delegates.

April 4—Legislation drafted by Association and introduced in the legislature. This was House Bill 690. Another bill, H.B. 633, to implement only the near-needy provisions of the law, was also introduced independently.

April 4—Statement on introduction of bill released in Jefferson City.

April 5—Letter to Council enclosing April 6 news release and reporting introduction of H.B. 633.

April 6—Statewide news release on Association endorsement of H.B. 690.

April 6—MSMA prepared analysis of Kerr-Mills law, and AMA "Five Reasons for Support of Kerr-Mills" sent as background information with the April 6 release to all Missouri newspapers.

April 21—Letter to all members requesting support of H.B. 690.

April 21—Analysis of H.B. 690, and "Five Reasons for Support of Kerr-Mills" sent with letter, and with April 27 letter to Woman's Auxiliary.

April 25—Letter to all societies requesting organization and support of H.B. 690.

April 27—Letter to Woman's Auxiliary requesting similar organization and support of H.B. 690.

May 2—Testimony supporting H.B. 633, but urging adoption of full Kerr-Mills program (H.B. 690), prepared and given at House committee hearing.

May 2 to June 1—Testimony given at several committee hearings, and compromise amendments to bill prepared to incorporate features of H.B. 633, and to reduce projected costs to more acceptable levels.

May 26—Letter to all local societies reporting on legislative developments and urging increased action in support of H.B. 690.

June 2—Letter to Council reporting projected action of legislature on Kerr-Mills implementation (i.e. delay until 1963).

June 14—Letter to all members reporting final action on Kerr-Mills (appointment of a joint House-Senate interim committee to study the needs of the aged) and urging opposition to King-Anderson proposals.

From the over-all viewpoint, the results of this Association program can be considered good. Legislators informally reported a good volume of letters and other communications in support of Kerr-Mills implementation. There was widespread use of Association news releases and a number of very favorable editorials were generated in newspapers throughout the state. A great deal of interest was fostered in the Kerr-Mills program, both on the part of legislators and the general public, and much additional understanding and support was gained.

The 1961 Association campaign in support of Kerr-Mills has laid a substantial foundation for future action. With the establishment of a joint House-Senate interim study committee by the legislature to investigate the needs and costs for old-age medical care in the state and to make recommendations to the next General Assembly in 1963, Kerr-Mills implementation is still a live issue. The Association's program to gain further public understanding of the advantages of Kerr-Mills, to gain additional support from important groups, and to assist, wherever possible, in the study of the problems in the state, has continued since adjournment of the legislature, and will be intensified during 1962.

### KING-ANDERSON

Activity on the King-Anderson proposals for medical care of the aged through the Social Security system has been intense during 1961, leading toward an expected climax in the 1962 session of Congress.

The Missouri State Medical Association's program in opposition to these proposals has been carried on since the introduction of the bills early in 1961.

The campaign reached one peak in August at the time of the hearings by the House Ways and Means Committee, and another in November and December when the Regional White House Conference on Aging was held in St. Louis, followed by hearings in six Missouri cities by Senator Edward Long and the Senate Committee on Aging. Through the year, however, the Association has expended a great deal of effort to provide background material on the proposals and gain support for the medical profession's position.

Immediately after the Annual Session in Kansas City, copies of the House of Delegates resolution opposing the King-Anderson approach were sent to the President of the United States and all Missouri federal legislators.

Early in May, the Association helped the Woman's Auxiliary launch "Operation Coffee Cup," a national AMA program for the women to hold "coffees" for friends and neighbors at which a recording by Ronald Reagan is played and letters to Congress opposing King-Anderson solicited. In Missouri, MSMA supplemented the AMA material with an analysis of Missouri H.B. 690 (Kerr-Mills), a pamphlet, "Socialized Medicine and You" and other materials.

Dr. Dowell spoke briefly at the Annual Banquet.

As background, copies of a reprint from *Look Magazine*, "A Family Doctor's Fight Against Socialized Medicine," were sent by AMA to all members in May.

The AMA "Action Kit" containing material on organizing on the county society level to oppose King-Anderson went to all local societies on June 1.

Late in June (following the letter reporting the Missouri legislature's action on Kerr-Mills and directing attention to King-Anderson), a letter was sent to all members again urging letters to Congress and distribution of AMA folders and pamphlets through the physician's office. A substantial number of folders have been distributed by physicians as a result of this and other offers.

As assistance for local speakers' bureaus, a speakers' kit was distributed to all local societies early in July.

During the hearings of the House Ways and Means Committee on H.R. 4222 (The King bill), MSMA filed a comprehensive statement expressing the Association's reasons for opposing the bill. The St. Louis County Medical Society also prepared written testimony for the committee with the assistance of our staff. Hearings on the bill ended on August 4, with no action being taken by the committee prior to adjournment of Congress.

To keep the membership abreast of these and other related legislative matters, a four-page bulletin was sent to all physicians early in September.

Also in September the Association reprinted an AMA *News* editorial in attractive folder form under the title "Against or For?" This explained the medical profession's opposition to those things against the public good and support of things in the public interest. Response to the folder has been excellent with some 16,000 copies already distributed through physicians' offices.

Late in September, a letter and bulletin were sent to all county medical societies as a supplement to the AMA "Action Kit" forwarded earlier. This bulletin again emphasized organization on a local basis, particularly in connection with enlisting the aid of groups outside the medical profession.

### WHITE HOUSE REGIONAL CONFERENCE ON AGING

On November 7 in St. Louis, the Kennedy administration held a major conference on aging, part of a series of such meetings held throughout the country. The announced purpose was to gather support for administration programs in this field, including medical care under the Social Security system, and to obtain the views of the public.

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The conference was led by Secretary of Health, Education and Welfare, Abraham Ribicoff and Secretary of Commerce Luther Hodges, aided by numerous federal, state and local officials.

The Public Service Committee, assisted by the St. Louis City and St. Louis County Medical Societies, alerted the press to the political nature of the Conference and encouraged attendance by groups both within and outside the profession that oppose Social Security medicine. Importantly, MSMA was also able to obtain a special place on the formal program of the meeting, the only outside organization to do so. Dr. R. O. Muether presented a statement on behalf of the medical profession which, with remarks from the floor by representatives of the St. Louis County Medical Society, was later characterized as a "debate" with Secretary Ribicoff in the press. The presentation of arguments by physicians, in fact, caused the government officials to cut short the program and the propaganda in favor of the King-Anderson proposals. Newspaper comment on the conference was quite favorable from the viewpoint of medicine.

### SENATE SPECIAL COMMITTEE ON AGING

During the first two weeks of December, the Senate Special Committee on Aging, chaired by Senator Edward Long of Missouri, held hearings in six cities in the state on the problems of senior citizens. The meetings consisted of formal morning programs on announced subjects, with the afternoons devoted to "town meeting" sessions with statements from the floor. Hearings were held in Kansas City (Federal-State Relationships), St. Louis (Housing), St. Joseph (Retirement Income), Springfield (Nursing Homes), Hannibal (Retirement Income) and Cape Girardeau (Retirement Income).

Preparations for these meetings were ably handled by the MSMA Committee on Aging, and are covered more extensively in the minutes and report of that Committee. Extensive background material was compiled and furnished representatives of the state Association and the county medical societies involved.

Representatives of MSMA and each county society appeared on the formal morning program at each meeting with the exception of the one in St. Louis where the subject was housing. For the afternoon open forum sessions, local societies encouraged groups and individuals on the side of medicine to attend and speak from the floor, in addition to providing spokesmen of their own. Releases on formal statements were furnished newspapers in the communities involved.

Senator Long's hearings were well attended by special interest groups supporting the King-Anderson proposals. As a result of the organized effort of MSMA and the local medical societies, however, the viewpoint of medicine received at least equal attention over-all, both before the committee and in the press.

### SUPPORTING ACTIVITIES

Achieving the objectives of the Public Service Program requires not only enlisting public support but the active participation of medical groups and individual physicians as well.

In both these tasks, the Committee has had the full support and assistance of the officers, Council and staff of the Association. As one example, the President, Dr. Summers, has addressed numerous groups over the state during the year on the subjects involved in the Public Service Program. Among these were the Southwest Region of the Missouri Hospital Association, the Annual Meeting of the Missouri Hospital Association, the Senior Medical Class at the University of Missouri, the Fall Board Meeting of the Woman's Auxiliary and the Cape Girardeau and Grand River Medical Societies.

Valuable assistance has been rendered by the American Medical Association also. Early in the year, the AMA made advertisements on Kerr-Mills versus King-Anderson available for local publication and more recently has begun supplying a series of advertisements designed to improve public attitudes toward medicine to all county societies.

In addition, the AMA has made available the services of Mr. James Foristel of the Washington office for addresses in Moberly and Cape Girardeau and of Mr. Frank Woolley, field representative for this area, who has spoken to the Marion-Ralls-Shelby, Jackson, Grand River, Greene, Clay and Buchanan County Medical Societies and to the Missouri Academy of General Practice, among other groups. Also with the help of AMA, Dr. Edward Annis of Miami, Florida, has been obtained as the principal speaker for the MSMA Annual Banquet.

**Dr. Froelich's family was in attendance when he received his fifty-year pin.**

Pursuant to a resolution passed by last year's House of Delegates, speeches on old age medical care by Congressmen Tom Curtis, St. Louis, and Durward Hall, M.D., Springfield, were published in MISSOURI MEDICINE in June and October, respectively.

Continuing and increased publicity efforts have been carried on throughout the year dealing with such Association Public Service activities as the MSMA Student Honors Awards, the American Medical Education Foundation campaign, the preceptorship program of the University of Missouri, the student loan program of the Missouri State Medical Foundation, and others. In general, the objective of the publicity program is to take advantage of every available opportunity to describe the activities of the Association in the public interest and to improve public attitudes toward the profession.

Still another promising public service activity that has moved forward during the last year is the compilation of a Missouri Directory of Health Resources. This project, in which the Woman's Auxiliary is actively involved, is directly related to the Association's efforts to assure that health needs of aged and indigent patients are satisfied, thereby obviating the need for King-Anderson type legislation.

At present, the Woman's Auxiliary is conducting county-by-county surveys of available sources of such care or treatment. A tabulation of work accomplished by the Auxiliary through January 1962, shows the following:

When minor aches and pains
disturb your patients' sleep...

**BAYER® ASPIRIN**
**DOESN'T MAKE THEM SLEEP,**
**IT LETS THEM SLEEP,**
**NATURALLY!**

**AND WITH BAYER ASPIRIN,**
**THERE'S NO**
**"SEDATIVE HANGOVER."**

There are, of course, a great many instances of sleeplessness in which the patient should be directed to take a sedative to induce sleep.

But there are also many instances in which sleeplessness is caused by nothing more serious than minor aches and pains which can easily be relieved by one or two tablets of Bayer Aspirin. With physical discomforts gone, sleep comes naturally.

And when Bayer Aspirin is used as a sleeping aid, patients never suffer the "sedative hangover" which so often follows an induced sleep.

So remember, when minor aches and pains disturb your patients' sleep, Bayer Aspirin doesn't make them sleep; it lets them sleep, naturally, with no "sedative hangover."

BAYER
ASPIRIN
BAYER
FAST PAIN RELIEF
Genuine

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Surveys have been completed in 26 counties.

Surveys are underway in 37 counties.

Surveys are planned in five counties.

Other arrangements are being made for the surveying of the state's remaining 46 counties.

### COUNTY SOCIETY ACTIVITIES

Throughout the year, the Committee and the MSMA staff have worked to provide county societies with practical information of all kinds on what has been done in the way of public service activity elsewhere and what can be done with a certain amount of application by a given society. The Committee reemphasizes the obvious fact that the burden of success in the Public Service program falls upon the local medical society and the individual physician—the job cannot be done on a state or AMA level alone. Contacts with the public are made in the local community. It is there that the most effective and persuasive efforts can be made to gain support for medicine and its point of view, and for this there is no substitute.

The role of the Public Service Committee in such local activity is one of guidance, encouragement and assistance. In 1961, the basic work was to encourage and aid in organization on a local level as blueprinted in the AMA Action Kit and the MSMA supplementary bulletin on organization mentioned previously. Further assistance was offered through the distribution of the newly revised AMA County Society Public Relations manual. County societies have been urged to develop public service activities on their own, to adopt local projects to solve community health care needs and to gain active participation by every member in the fight against the socialization of medicine. A great deal of stress has been laid on enlisting the support of organizations and individuals both allied to and outside of medicine.

Notable among examples of what local societies, large and small, have done are the St. Louis County Society's Over 65 Plan for a formalized program of reduced fees for senior citizens in need, and the highly successful Jackson County Health Fair. The St. Louis City Society has developed a books scholarship program in conjunction with the Matthews Medical Books Company to provide free books to selected Washington and St. Louis University medical students for the four-year course. Marion-Ralls-Shelby developed a president's newsletter which the Committee sent to all similar sized societies with a guide to publicity activity, urging them to develop not only internal communications media but to publicize the public service activities inherent in every society's program.

Cooper County Society, although a small group, purchased advertising space in the local newspaper at the time of the House Ways and Means Committee hearings on the King bill to explain medicine's opposition. The Cole County Society employed a public relations and publicity assistant on a part-time basis to help improve attitudes toward the profession in their area. One of their first projects was announcement of the development of a Civil Defense Medical Self Help training program for their community. Greene County has continued its medical student loan program, and with the other counties involved—Jackson, St. Louis City, St. Louis County, Buchanan, Marion-Ralls-Shelby and Cape Girardeau—took an active part in the Long Committee hearings.

Many other societies, of course, have programs designed to gain the public service program objectives. The MSMA Committee will continue to encourage and assist with these in every way possible.

### THE PUBLIC SERVICE PROGRAM FOR 1962-63

The medical profession and each individual physician should be fully aware that we are faced with one of the most intense efforts ever mounted by a national administration and the proponents of welfare legislation to gain passage of a compulsory federalized health care program.

For this reason, particularly, the Committee makes recommendation that the Association continue the Public Service Program now well started, and intensify and expand it in the coming critical year.

Principal specific projects that should be carried out include a campaign to obtain resolutions against the King-Anderson proposals from every possible organization in the State. This program, requested by the AMA, is now getting underway through the Association, the Woman's Auxiliary and the component medical societies.

A second campaign that will be required will be one to obtain individual letters to Congress opposing the Social Security health care plan. The objective of this program will be to obtain at least three letters from each Association and Woman's Auxiliary member, along with letters from five friends each. To obtain a large number of letters quickly, the Woman's Auxiliary has accepted the responsibility of operating a letter-writing booth during the Annual Session to obtain letters from all those attending.

Throughout the coming year there will be a continuing need for informational bulletins to individual members and local societies reporting developments in the Congress and providing background information on King-Anderson and Kerr-Mills which can be used in discussions with patients and friends. It is hoped also that a number of additional folders and pamphlets can be developed for distribution through physicians' offices and to specialized groups.

Another major project will be the preparation of background materials and testimony on the Kerr-Mills program and continued cooperation with the Missouri legislature's interim committee studying the problems of the aged and implementation of Kerr-Mills.

In general, 1962-1963 should see the continuation of the Public Service Program on an expanded basis, aiming toward the same three objectives of (1) promoting effective opposition to the King-Anderson proposals, (2) supporting the Kerr-Mills principle and (3) extending action programs on the local society level in order to satisfy health care needs where they may exist and to improve the public attitude toward the medical profession. Every effort must be made to reach all seg-

**Dr. Nuetzel, with chorus, entertained after the Sunday evening dinner.**

ments of the public in Missouri, to point out the dangers of compulsory Federal medical care programs, to stimulate communication with Congress and to demonstrate an overwhelming public opinion against the King-Anderson type of legislation. Every member of the Association must be prepared to devote time, effort and resources to this crucial program.

The demonstrated need for continuing Public Service activities in the face of recurring efforts to change the practice of medicine leads the Committee to make the further recommendation that the Public Service Program become a permanent part of the operation of the Association and that the Public Service Committee, with somewhat broadened functions, be established as a permanent standing committee under the by-laws. It is felt that such a committee could serve as an over-all coordinating group in the areas of public service activity, public relations and public education and become a rallying point for the association's more specialized committees, such as the Committees on Aging and on Medical Economics, as examples, when they are faced with problems in the public service field. In addition, such a committee would be of additional value in encouraging and assisting the public service activities of the component societies.

R. O. Muether, Chairman,
J. H. Summers,
Donald M. Dowell,
Kenneth C. Hollweg,
Byron M. Stuart,
Leonard T. Furlow.

The report was referred to the Reference Committee on Miscellaneous Affairs.

(The following supplementary information on the budget and expenditures of this Committee is appended to this report in compliance with a resolution adopted by the 1962 House of Delegates which appears on page 660.)

PUBLIC RELATIONS STAFF SERVICE

| | |
|---|---|
| Includes services of three executives of the Association's public relations agency, together with related administrative, secretarial and clerical assistance in research and preparation of background materials, preparation of speeches and hearing testimony, news releases, special reports and communications to the membership, associated travel, attendance at meetings, etc. | $ 9,000.00 |
| Salary--temporary coordinator, during initial program period | 1,150.00 |
| Pamphlet—"Against or For"—preparation and printing folder for distribution through physicians' offices explaining medical profession's opposition to King-Anderson bill | 378.25 |
| Reprints—Dr. Hall's statement to House Ways and Means Committee opposing King-Anderson. Made available to interested physicians, legislators, civic and public officials | 144.57 |
| Senate Committee on Aging Hearings (Senator Long) MSMA Committee meetings in preparation | 299.71 |
| Staff travel to hearings in Kansas City, St. Joseph and Hannibal | 199.18 |
| Staff travel—Conference to assist Cole County Society in formulating public relations program | 27.94 |
| Total | $11,199.65 |

The report of the Council on the creation of a Committee on Public Service in lieu of the standing committees on Public Policy and Public Relations, and Health and Public Instruction, appeared in the Handbook as follows:

### REPORT OF THE COUNCIL ON PUBLIC SERVICE COMMITTEE

The Council approves the report of the Public Service Committee, with commendation for the tremendous amount of effort effectively carried out, and recommends that the House of Delegates accept the Committee's recommendations for the future conduct of the Public Service Program. The Council also approves the recommendations made by the Public Service Committee and the Committee on Public Policy and Public Relations to establish a Committee on Public Service as a standing committee under the By-Laws to handle the public service, public relations and public education activities of the Association. It is believed that this change will make for greater efficiency of operation and provide more effective coordination for both state and local levels.

The Council therefore recommends the following amendment to the By-Laws:

Amend Chapter VII, page 6, Section 2, of the By-Laws by striking out "A Committee on Public Policy and Public Relations" and "A Committee on Health and Public Instruction (McAlester Foundation)" and substituting in lieu thereof "A Committee on Public Service," and further amend Chapter VII, page 7, Section 2, by striking out the paragraphs beginning "The Committee on Public Policy and Public Relations shall consist . . ." and "The Committee on Health and Public Instruction (McAlester Foundation) shall keep in touch with . . ." and substituting in lieu thereof "The Committee on Public Service shall concern itself with promoting good relations between the profession and the public, and act to represent the Association in matters of public affairs. It shall cooperate with similar committees of the county medical societies in order to disseminate information to the public regarding the science and art of medicine and the protection of public health.

Further amend Chapter XI, page 9, Section 10, by striking out the entire section, and amend Chapter XI, page 9, Section 11, by striking out "Section 11" and inserting "Section 10" in lieu thereof.

The Speaker referred this report of the Committee on Public Service and the recommendation of the Council concerning the Committee report and the recommended change in the By-laws to the Reference Committee on Constitution and By-Laws.

The report of the Council concerning a proposed raise in dues appeared in the Handbook as follows:

DUES

Several highly significant factors emerged in the Budget Committee's and Council's considerations of the financial condition of the Association for this and coming years.

Foremost, it is essential that the Association continue its standard activities at current levels or even at an accelerated pace. In view of the problems facing the profession in the areas of legislation, government programs, interprofessional relations, voluntary health care protection, education and many others, the Association must continue to carry out its present programs in the interests

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of medicine and the public and, at the same time, maintain its sound policy of striving toward reserves equal to one year's operating expense.

Association expenses for basic operations can be expected to continue on a level at least equal to that of last year, despite economies effected by the staff. These activities are fundamental to the life of the Association, however, and it is necessary that they be carried forward.

Added to this is the critical need to continue and expand the Public Service program, not only for this year but on a permanent basis. The urgency of this program is covered at greater length in the report of the Public Service Committee, but the Council again adds its opinion here that it is mandatory for the Association to increase its efforts in the public service area in order to provide the real solutions to problems of health care and deal effectively with implementation of Kerr-Mills and defeat socialized medicine proposals.

Finally, the need for additional Association financial support for the Missouri State Medical Foundation and the student loan program is obvious from the report of the Foundation. This has become perhaps the foremost program of the Association in gaining public respect and good-will—not only through assuring the training of future physicians, but in demonstrating that this can be done by medicine and private enterprise without the need for federally controlled grants. While it is hoped that private contributions will supplement the fund once their tax status is established, it is apparent that direct and substantial assistance must continue from the Association itself if the program is to accomplish its objectives.

**Dr. Summers received his Past President's Key from Dr. Dowell.**

In the face of these essential needs, the Association has suffered a substantial decrease in the advertising revenues from MISSOURI MEDICINE. Revenues for 1961 were were $22,400 below those of 1960—a drop of almost 33 per cent. Since the Association has been deriving approximately one third of its total income from advertising revenues, this has an extremely serious effect on the organization's finances. In fact, on total operations including contributions to the student loan fund, the Association shows a loss of $33,300 for the year.

In some degree, the decrease in advertising has been due to the loss of a few national advertisers, but the main pattern is a reduction in the amount of space used by the individual advertiser and a reduction in the use of color and special inserts. While printing costs are somewhat lower on this basis, the loss in revenues far exceeds the savings. The drop in advertising income for state medical journals is nationwide and, although the staff is attempting to secure additional advertising, an analysis of the trends in the drug and medical supply industries indicates that the Association should expect the lowered level of revenues to continue.

In view of these factors, the Council strongly recommends an increase of $15 in the annual active membership dues, one-half to go into the general fund, one half to be earmarked for the Missouri State Medical Foundation student loan fund.

At the present $35 figure, Missouri is among the lowest in state Association dues. As indicated on the accompanying list of present or proposed 1962 dues, 34 Associations have dues of $50 or more, 15 Associations have dues of $35 to $50, and two Associations have dues of less than $35. Two states in addition to Missouri propose increases in dues this year, while 11 Associations raised dues last year.

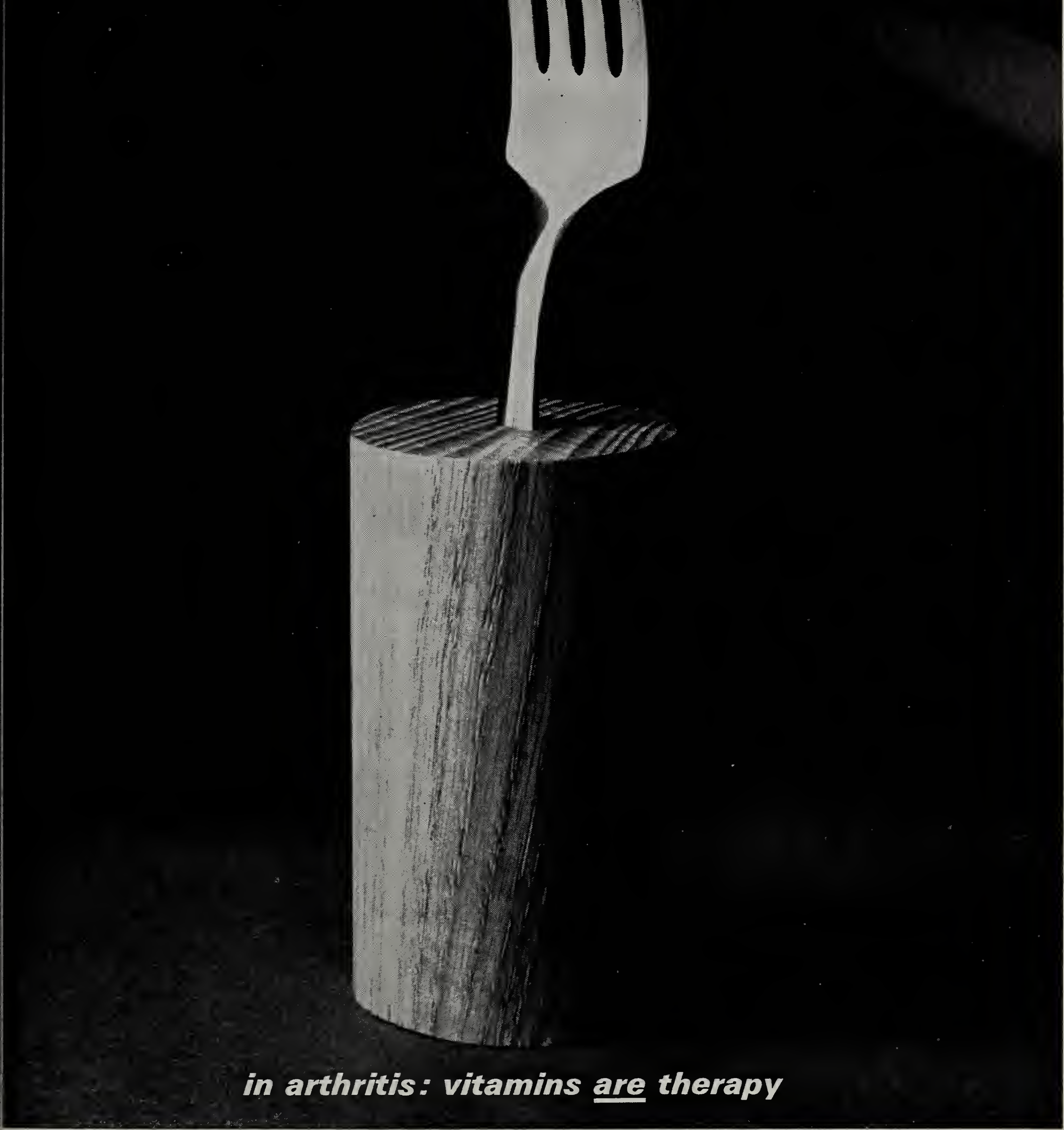
On the basis of 3,065 active and 346 junior members of the Missouri State Medical Association, the tax-deductible increase of $15 in active dues ($7.50 junior) would mean $24,285 for the student loan fund annually—comparable to the $25,000 annual appropriations established by the Association in the past. Another $24,285 would be available for the basic operations of the Association and for the essential activities of the Public Service program—offset against the $22,400 loss in advertising revenues.

To provide this much needed income, the Council recommends the following amendment to the By-Laws:

Amend, Chapter VIII, Page 8, of the By-Laws, Section 1, line 2, by striking out the figure, "$35.00," and inserting in lieu thereof the figure "$50.00."

Further amend Chapter VIII, Page 8, of the By-Laws, Section 2, by adding the following sentence after the period in line 3: "Seven and one half dollars of the annual dues of active members and three dollars and seventy-five cents of the annual dues of junior members shall be paid annually by the Treasurer to the Missouri State Medical Foundation."

| *State* | *1962 Dues* | *Remarks* |
|---|---|---|
| ALABAMA | $ 50.00 | |
| ALASKA | 75.00 | |
| ARIZONA | 85.00 | $15 goes to AMEF |
| ARKANSAS | 35.00 | $5 goes to medical education |
| CALIFORNIA | 75.00 | |
| COLORADO | 60.00 | |
| CONNECTICUT | 33.00 | |
| DELAWARE | 50.00 | *Plus* $5 for scholarships ($55) |
| DISTRICT OF COL. | 70.00 | |
| FLORIDA | 40.00 | |
| GEORGIA | 40.00 | |
| HAWAII | 60.00 | $6 goes for JOURNAL |
| IDAHO | 83.00 | |
| ILLINOIS | 80.00 | $20 goes to AMEF |
| INDIANA | 50.00 | $19.25 goes to various funds |
| IOWA | 90.00 | |
| KANSAS | 50.00 | |
| KENTUCKY | 50.00 | |
| LOUISIANA | 50.00 | |
| MAINE | 55.00 | |
| MARYLAND | 50.00 | |
| MASSACHUSETTS | 35.00 | |
| MICHIGAN | 80.00 | |
| MINNESOTA | 55.00 | $4 goes to indigent MDs & scholarships |
| MISSISSIPPI | 50.00 | |
| MISSOURI | 35.00 | |
| MONTANA | 65.00 | |
| NEBRASKA | 35.00 | |
| NEVADA | 100.00 | $20 to AMEF & 1962 portion of $100 building assessment |
| NEW JERSEY | 35.00 | |
| NEW MEXICO | 90.00 | |
| NEW YORK | 35.00 | |
| N. CAROLINA | 50.00 | |
| N. DAKOTA | 100.00 | |



In dealing with the chronic stress of arthritis the physician often faces the problem of nutritional imbalance. High potency B and C supplementation is needed for rapid replenishment of tissue stores of these water-soluble vitamins. STRESSCAPS meet this need and help support the natural metabolic defenses in the disease. Supplied in decorative "reminder" jars of 30 and 100.

| **Each capsule contains:** | |
|---|---|
| Vitamin $B_1$ (Thiamine Mononitrate) | 10 mg. |
| Vitamin $B_2$ (Riboflavin) | 10 mg. |
| Niacinamide | 100 mg. |
| Vitamin C (Ascorbic Acid) | 300 mg. |
| Vitamin $B_6$ (Pyridoxine HCl) | 2 mg. |
| Vitamin $B_{12}$ Crystalline | 4 mcgm. |
| Calcium Pantothenate | 20 mg. |

Recommended intake: Adults, 1 capsule daily, or as directed by physician, for the treatment of vitamin deficiencies.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y. Lederle

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| | | |
|---|---|---|
| OHIO | 30.00 | $5 increase proposed for 1963 ($35) |
| OKLAHOMA | 47.00 | $5 goes to scholarship fund |
| OREGON | 50.00 | |
| PENNSYLVANIA | 60.00 | |
| PUERTO RICO | 52.00 | *Plus* $27 for life insurance plan ($79) |
| RHODE ISLAND | 50.00 | |
| S. CAROLINA | 35.00 | *Plus* $10 (voluntary) for AMEF ($45) |
| S. DAKOTA | 100.00 | |
| TENNESSEE | 40.00 | |
| TEXAS | 45.00 | |
| UTAH | 85.00 | |
| VERMONT | 65.00 | |
| VIRGINIA | 25.00 | |
| WASHINGTON | 45.00 | $15 increase proposed ($60) |
| WEST VIRGINIA | 38.00 | $6 goes to scholarship fund |
| WISCONSIN | 90.00 | |
| WYOMING | 50.00 | |

The Speaker referred this report to the Reference Committee on Constitution and By-Laws.

The following report of the Council on the AMA-National Blue Shield Over-65 Plan, together with a news release from the AMA, appeared in the Handbook, as follows:

### A.M.A.-NATIONAL BLUE SHIELD OVER-65 PLAN

On January 18, the American Medical Association and the National Association of Blue Shield Plans jointly announced a projected full-payment medical-surgical program for persons over age 65.

Full-payment benefits would be provided for single persons over age 65 with annual incomes of $2,500 or less and for couples with incomes of $4,000 or less. For those with incomes greater than these amounts, benefits would apply as indemnity payments on physicians' charges.

Although benefits and rates are to be uniform throughout the country, the program is to be underwritten and administered by the individual local Blue Shield Plans under a pooling arrangement. Fee schedules also are to be determined locally using the relative value principle.

The new program obviously has been designed by the AMA and the National Association of Blue Shield Plans as a major weapon in the fight against the King-Anderson proposals for Social Security medicine. While emphasizing that there is no need for federal government participation or subsidy, such a program could be utilized under the Kerr-Mills law if a state so desired, and could also be used in conjunction with the hospitalization plan recently announced by Blue Cross and the American Hospital Association.

The importance being placed on the program by the AMA is evident from the Association's release to the press, a proposal for a national advertising program to enroll as many people over 65 as possible, and the AMA Board of Trustees' recommendation that "constituent medical associations take such action as is necessary to cooperate with the proposed Blue Shield plan."

For the information of delegates, the Council is reprinting herewith the original AMA news release announcing the program and a brief description of the provisions of the plan as they had been received at the time the Delegates Handbook went to press. (If, as is possible, changes are made in the program before the Annual Session in St. Louis, they will be given to the House in a supplemental report of the Council).

In view of the essential nature of this program and the position taken by the AMA, the Council recommends that the House of Delegates go on record as approving the principle of the proposed AMA-Blue Shield medical-surgical protection plan for those over age 65, and further recommends that the House, recognizing that it will be the individual physician's privilege to participate or not when specific programs are presented, request that the two Blue Shield Plans of Missouri proceed as quickly as possible to develop specific programs, following the outline of the national plan, for submission to the physicians of their areas for consideration.

#### A BRIEF SUMMARY OF THE PROPOSED AMA-BLUE SHIELD PROGRAM FOR THE AGED

The program will be a uniform, nationwide contract for persons over age 65 to include the following basic medical-surgical benefits for services provided and billed by a physician:

1. Surgery—wherever performed
2. Anesthesia service
3. In-hospital medical care—up to 70 days each admission
4. Medical care in nursing homes—on basis of one visit per week
5. Radiation therapy for malignancies
6. X-ray examinations with film for hospital bed patients and for out-patients within 72 hours of an accidental injury
7. Laboratory and pathological examinations for hospital bed patients.

Covered services to be paid-in-full benefits for single persons with incomes of $2,500 annually, for husband and wife with combined income of $4,000 or less. Fee schedules to be determined locally on a relative value basis.

Rates to be uniform nationwide, estimated at approximately $3 per person.

Limitations and exclusions to be minimal with no age limits, no restrictions on preexisting conditions and no waiting periods.

(It should be emphasized that the program is still subject to minor modifications.)

#### NEWS RELEASE FROM THE AMERICAN MEDICAL ASSOCIATION

For release in a.m. papers dated Thursday, January 18, 1962.

CHICAGO—A uniform, nationwide Blue Shield program of surgical and medical care benefits for all persons over the age of 65 which will be available at an estimated cost of about $3 a month per person was announced jointly Wednesday by the American Medical Association and the National Association of Blue Shield Plans.

F. J. L. Blasingame, M.D., executive vice president of the American Medical Association, said the AMA Board of Trustees had reviewed an outline of the surgery and medical care benefits to be offered by the nation's 69 Blue Shield plans and had recommended that all state medical societies cooperate fully with their local Blue Shield affiliates in implementing the program as soon as possible.

Blue Shield plans provide benefits for physicians' services.

John W. Castellucci, executive vice president of the National Association of Blue Shield Plans, said the proposed new Blue Shield program would provide for surgery whether performed in a hospital or a doctor's office and for medical care whether in a hospital or a licensed nursing home.

Castellucci said it would also provide payments for anesthesia, radiation treatments, x-ray examinations and for laboratory tests and pathology services. He said the extent of coverage for doctors' visits in a hospital or nursing home had not been set, but he indicated that the program would provide for no less than 30 visits and possibly as high as 70.

Castellucci said the Blue Shield program will pay the full cost of medical-surgical services for single persons over 65 whose annual income is $2,500 or less and for a husband and wife whose combined annual income is $4,000 or under. Persons enrolled in the new program whose income exceeds these limits could be subject to an additional charge, Castellucci said, but he pointed out that this would be at the discretion of the individual physician.

He said that "limitations and exclusions would be minimal" and that it is contemplated that even pre-existing conditions would be covered.

Dr. Blasingame said that the proposed Blue Shield program represents "another important step in the direction of achieving through voluntary, private initiative an effective solution to the problem of meeting the health care needs of the aged."

Castellucci said the new program neither asks for nor requires a federal subsidy. He said that "the National Association of Blue Shield Plans is prepared to cooperate fully with the AMA and local medical groups so that the needs of the country's senior citizens for adequate health care protection can be provided under a system in which the interests of both the physician and his patient will be properly served."

Dr. Blasingame said the AMA Board of Trustees had adopted a resolution favoring the Blue Shield program for the aged which stated:

"In December 1958 a policy adopted by the AMA House of Delegates recommended that physicians 'expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income' and that 'physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate.'

"The Board of Trustees believes that a plan proposed by Blue Shield for national coverage of physicians' services for those over 65 under certain income limits conforms with the spirit of this policy. The Board of Trustees recommends that the constituent medical associations take such action as is necessary to cooperate with the proposed Blue Shield plan, and applauds this effort by the Blue Shield."

Dr. Blasingame said the trustees' resolution had been sent to local medical societies and that representatives of the AMA and the Blue Shield organization would work closely together in getting the local medical and Blue Shield groups to make necessary arrangements for offering the new program as soon as possible.

The speaker referred to the Reference Committee on Miscellaneous Affairs.

The following information on the St. Louis Blue Shield Plan was reported by the Council in the Handbook as follows:

## ST. LOUIS BLUE SHIELD PLAN

For more than six years, the automobile industry has had labor contracts with its employees calling for paid-in-full hospital and medical-surgical benefits for workers earning $7,500 a year or less.

During this time, the companies have depended upon Blue Cross and Blue Shield for such protection. In indemnity areas such as St. Louis Blue Shield, however, full payment benefits have not been available.

In the 1961 contract negotiations the automobile companies agreed to pay the full cost of health protection for their employees. Together, they are now making an insistent effort to obtain full coverage protection and the predictability of medical costs which this affords. (Many other prominent groups also have expressed strong desires for this kind of coverage through the years.)

In October of 1961, St. Louis Blue Shield executives were told by officers of the General Motors, Ford and Chrysler companies that unless the Plan could furnish a full-payment program early in 1962 the automobile industry memberships would be withdrawn. In this connection, the automobile company Blue Shield memberships in Illinois and Ohio have already been canceled and replaced by a special experimental commercial insurance company program.

There are some 55,000 automotive workers and their dependents enrolled in St. Louis Blue Shield. This is the largest group in the Plan, constituting almost 9 per cent of the total enrollment. Needless to say, loss of this group would have serious adverse effects on the Plan.

In this situation, however, Blue Shield has not advocated any particular course. Instead, it has attempted to determine the attitude of the medical profession and be guided by physician opinion.

At a meeting of the Blue Shield-County Medical Socities Liaison Committee in November, to which the presidents of all local medical societies in the St. Louis Plan area were invited, Blue Shield was asked to present the problem to local societies for their recommendations as to whether a specific indemnity-full-coverage program should be developed and submitted to the physicians of the area for their approval or disapproval.

On the basis of the response to this query—15 of the 16 societies replying recommended development of a specific program for the consideration of physicians—the Board of Trustees of St. Louis Blue Shield has directed the development of such a proposal, and work is now under way.

These steps have been reported to the automobile companies, and they have agreed to delay cancellation of their groups for a limited time, meanwhile accepting an improved indemnity program for the interim.

The Council believes that the Trustees, officers and staff of St. Louis Blue Shield are to be commended on the manner in which they have proceeded in this matter. At the same time, it believes the Plan, which was formed and has continued under the sponsorship of the Missouri State Medical Association, deserves a clear statement of the position of the House of Delegates on the principle of a full-payment program. In the Council's judgment, the time has come when the medical profession of Missouri must decide whether or not it favors or is unalterably opposed to full-payment or service benefits programs for the St. Louis Blue Shield Plan.

The Council therefore proposes the following resolution:

*Resolved,* That the House of Delegates of the Missouri State Medical Association hereby approves and encourages the development of a specific and detailed combination indemnity-full coverage program by the St. Louis Blue Shield Plan for submission to the physicians of its area for their consideration.

The Speaker referred this material to the Reference Committee on Miscellaneous Affairs.

SUPPLEMENTAL REPORT OF THE COUNCIL

Kenneth C. Hollweg, M.D., Kansas City: I wish to give you the report of the Committee on Corporate Practice which met in St. Louis on January 28, Donald M. Dowell, M.D., Chillicothe, presiding.

## REPORT OF COMMITTEE ON CORPORATE PRACTICE

### PROFESSIONAL ASSOCIATIONS (KINTNER TYPE)

The Committee is aware of legislation passed in 1961 in 15 states which permits the formation of professional associations.

The Committee is also aware of several charter applications now pending in the Missouri Attorney General's office that have been submitted by professional associations (medical).

Since the Internal Revenue Service has, as yet, issued no ruling on the status of professional associations, the MSMA Committee on Corporate Practice favors further study of *existing and/or alternative* types of legislation providing for the establishment of professional associations.

As a result of the Committee's studies in this matter to date, we feel that any legislative proposals authorizing creation of professional associations in Missouri should contain certain safeguards to preserve the high ethical level of medical practice. Among these safeguards are:

1. There must be a minimum of two or more licensed practitioners of the healing arts involved in the creation of any professional association.
2. Shareholders in such an association must in all instances be active practitioners of the healing arts and be employed by the association.
3. Control of all stock made available for sale by the resignation or death of one or more of the stockholders shall revert to the remaining stockholder or stockholders by means of previously agreed upon articles of association.
4. The Council, or a committee of its choosing, should prepare a formal pattern of any proposed enabling legislation and circulate it to the MSMA membership no later than December, 1962—prior to actual introduction of such legislation at the next General Assembly of the Missouri Legislature in 1963.

The report of the Committee on Corporate Practice was presented to the Council at its meeting this morning, March 18. It was agreed that the Committee restudy the problem of Kintner type associations in view of the opinion of the Attorney General on March 15, the conclusion of which is as follows: "Under Missouri law, corporations cannot practice medicine. However, contracting to supply medical services and contracting with licensed medical practitioners to furnish such services does not constitute the practice of medicine under present Missouri court decisions. Therefore, making such contracts constitutes a proper corporate purpose." The Committee will be asked to make a report to the members later.

The Speaker referred this portion of the report to the Reference Committee on Miscellaneous Affairs.

Dr. Hollweg: The next portion of the supplemental report deals with the King-Anderson bill, as a resolution:

Whereas, The Congress of the United States has under consideration H.R. 4222 and S. 909, known as the King-Anderson bills, along with similar proposals for compulsory health care programs using the Social Security system for taxation and provision of benefits, and

Whereas, Institution of such programs for any particular group of the population, such as the aged, will inevitably bring about extension to other groups, so that eventually all citizens will be under a federally controlled plan of socialized medicine, and

Whereas, Such programs must unquestionably, result in tremendously increased costs for health care and a deterioration in the quality of that care, and

Whereas, Voluntary private methods for the financing of health care costs now in existence or under development are more than adequate to solve the problems of providing for the expense of health services for the nation's population, including the aged, and are vastly superior to the Social Security plans proposed, therefore be it

*Resolved*, That the physicians of Missouri, through the House of Delegates of the Missouri State Medical Association, hereby reaffirm their opposition to compulsory health care programs for the aged or any other groups of the population provided and administered under the Federal Social Security system, and, be it further

*Resolved*, That copies of this resolution be forwarded to the President of the United States and to the members of the Congress from the State of Missouri.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Dr. Hollweg: Concerning corporate practice, the following resolution was adopted at the 1961 House of Delegates:

Whereas, The chief concern of the MSMA is with the welfare of their members, and

Whereas, Recent trends among some hospital administrators show a tendency to put the hospitals in the position of leadership in the field of general health care, a traditional role of the practicing physician, and

Whereas, The National Hospital Accreditation Boards do not take this aspect of the hospital program into account, and

Whereas, This type of operation would seem to fall within the limit of corporate practice of medicine, therefore, be it

*Resolved*, That the present Committee of the MSMA, charged with studying the question of corporate practice of medicine, be instructed also to study the trend and, be it further

*Resolved*, That the Committee study the feasibility of a State Accreditation Board under the direction of the MSMA, to accredit hospitals in light of this aspect, as well as the general adequacy of the individual hospitals in the State of Missouri, and to license hospital administrators within the state.

The Committee, on motion, duly seconded, submits the following report regarding the resolution:

1. To promote better relations between MSMA and the Missouri Hospital Association, it is recommended that the existing (MSMA-MHA) Liaison Committee be reactivated.
2. It is not feasible for MSMA to attempt to create a state hospital accreditation program.
3. It is not feasible for MSMA to develop a program to license hospital administrators.
4. The Hospital Advisory Council to the State Division of Health, which assists the Division in administering the Hospital Licensing Act, is composed of three doctors of medicine, one doctor of osteopathy, one hospital administrator and two businessmen.

The Speaker referred this portion of the supplemental report of the Council to the Reference Committee on Medical Education and Public Welfare.

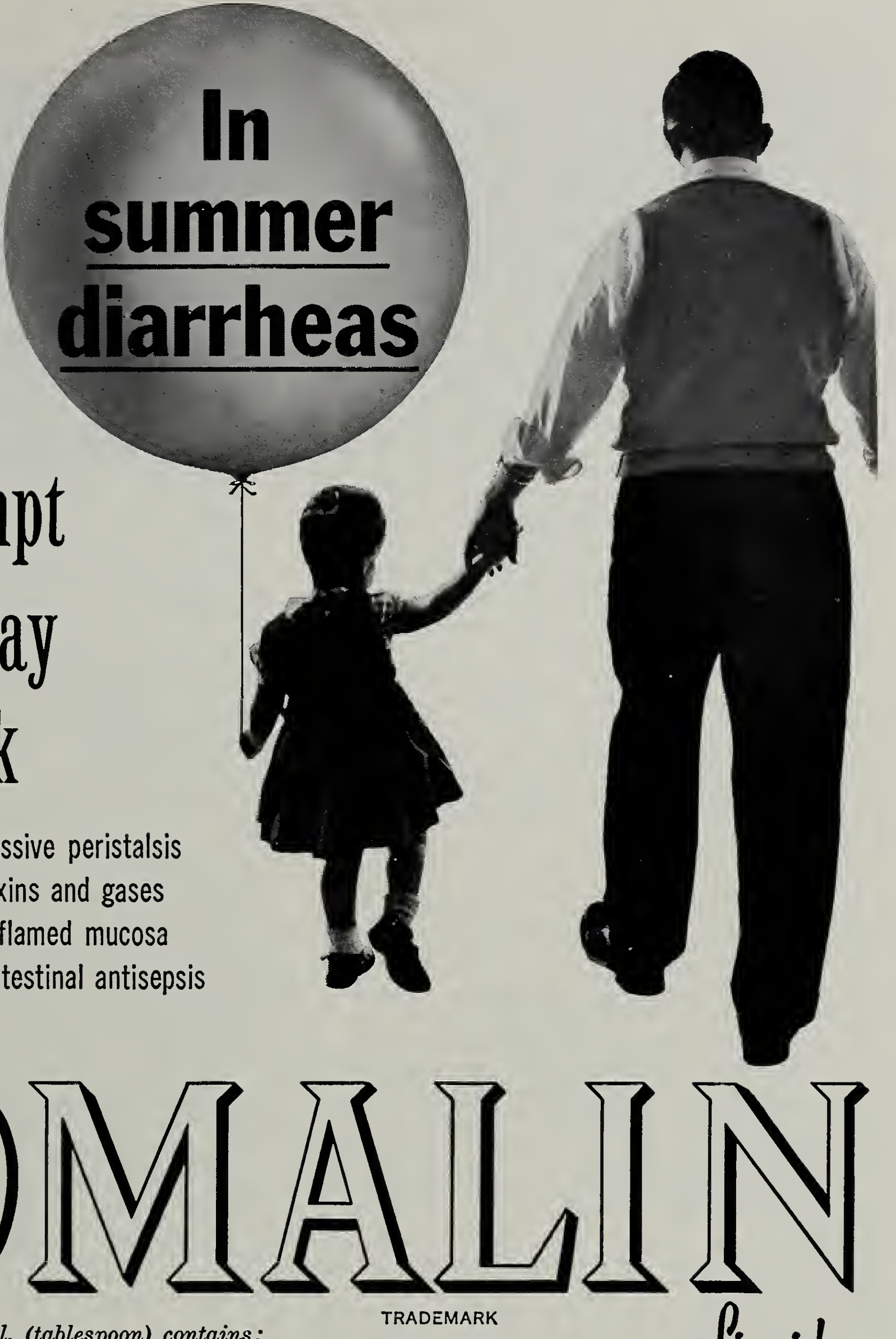
Dr. Hollweg: I wish to present the following recommendation on medical recruiting:

## RECOMMENDATION ON MEDICAL RECRUITING

The Missouri State Medical Association Committees on Medical Education and Hospitals and Rural Medical Service at their joint meeting in Jefferson City on February 11, 1962, discussed with a great deal of concern the reduction in the number of high caliber students applying for admission to medical schools in recent years.

The problem is not so much to increase the total number of applicants for medical schools but to increase the number of high quality students who apply. This implies a program that not only interests young people generally in medical careers but includes selective promotion of medicine as a profession among top ranking students at all educational levels.

The Committees recognize that the Association, notably through the program initiated by the Public Service Committee in 1960, along with a number of component societies and individual members, has been making



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- ✓ Curbs excessive peristalsis
- ✓ Adsorbs toxins and gases
- ✓ Soothes inflamed mucosa
- ✓ Provides intestinal antisepsis

POMALIN
TRADEMARK
Liquid

EFFECTIVE ANTIDIARRHEAL

**FORMULA:** *Each 15 ml. (tablespoon) contains:*

| | |
|---|---|
| Sulfaguanidine U.S.P. | 2 Gm. |
| Pectin N.F. | 225 mg. |
| Kaolin | 3 Gm. |
| Opium tincture U.S.P. | 0.08 ml. |

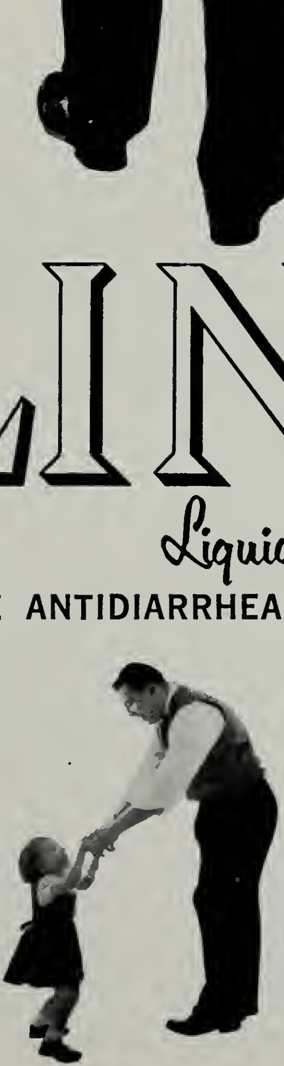
(equivalent to 2 ml. paregoric)
Warning: May be habit forming.

**DOSAGE:** **Adults**—Initially 1 or 2 tablespoons from four to six times daily, or 1 or 2 teaspoons after each loose bowel movement; reduce dosage as diarrhea subsides.

**Children**—½ teaspoon (=2.5 ml.) per 15 pounds of body weight every four hours day and night until stools are reduced to five daily, then every eight hours for three days.

**SUPPLIED:** *Bottles of 1 pint (raspberry flavor, pink color)*
*Exempt Narcotic. Available on Prescription Only.*

Winthrop
LABORATORIES
New York 18, N. Y.



definite efforts to help solve this pressing problem. They feel, however, that these efforts should be intensified and strengthened.

The Committees on Medical Education and Rural Medical Service therefore recommend that the MSMA House of Delegates call upon each county medical society, under the leadership of the Public Service Committee and assisted by these two Committees, to develop and promote an effective local program to assist in the recruiting of high caliber candidates for the study of medicine.

The Committees further suggest that this recommendation might be implemented through:

1. Establishing a committee in each local medical society to assume leadership in recruiting.
2. Encouraging individual physicians to discuss medical careers with individual students and their parents.
3. Establishing and maintaining contacts between the local medical society and local high school and college science teachers and educational counselors.
4. Furnishing of medical career materials available from AMA and other recognized sources by the local medical society to schools and interested groups and individuals.
5. Promoting talks by physicians on medicine as a career before student science clubs, science classes, career day assemblies, etc.
6. Promoting the idea within the medical society that individual members, through personal contact with promising students and their parents, are the most effective assurance of an adequate supply of "good doctors for the future."

The Speaker referred this portion of the report to the Reference Committee on Medical Education and Public Welfare.

Dr. Hollweg: Following is the report of the Committee on Control of Vencreal Disease:

## REPORT OF THE COMMITTEE ON CONTROL OF VENEREAL DISEASE

The Committee on Control of Venereal Disease met at the Missouri Hotel, Jefferson City, January 10, 1962. Members in attendance were Drs. E. M. Powell and T. E. McMillan. Others in attendance were Drs. E. A. Belden and L. M. Garner, and Mr. Wilson Corcoran of the Division of Health, Dr. Jack Shapiro of the St. Louis Health Department, Mr. Ray McIntyre of the State Medical Association staff, and Dr. Hollis Allen of the Committee on Laboratory Medicine of the Association.

Dr. Shapiro reported on the pilot study in St. Louis of substituting names rather than numbers in the present laboratory reporting system. This was a tremendous success. Of 1,425 reactive reports, only 387 required further follow-up. The remaining 1,000 cases were found to be duplications which were easily dispositioned by this method without troubling the physicians or further effort by the Health Department. Another interesting facet of the reporting system was that in 1960 there were 13 cases of primary and secondary syphilis reported by private physicians, in 1961 there were 63 cases—an increase of 400 per cent. Also of interest was that the Health Department received 100 per cent cooperation from the private physicians in these cases. There were no known complaints in the follow-up studies from this method of reporting.

The Committee wishes to bring to the attention of members of the Missouri State Medical Association that the regulations of the Missouri Division of Health relating to the control of communicable and other diseases dangerous to public health, now on file with the Secretary of State, require a physician in attendance on a patient having or suspected of having syphilis, report the case using name of patient, directly to the Director of the Missouri Division of Health, Jefferson City, in addition to reporting to the local city, county or district health department.

**The House of Delegates held its first session Sunday afternoon.**

Also, the director or person in charge of any laboratory shall report to the Missouri Division of Health, Jefferson City, the result of any test that is positive for, or suggestive of, syphilis. Such reports shall designate the test performed, the results of the test, the name of the attending physician and the name of the patient.

The question of definitive tests for syphilis was discussed. It was felt by those present that there was still considerable confusion as to what tests should be used, where to have these tests made, and the relative cost of the different tests.

A motion was made by Dr. Powell and seconded by Dr. McMillan that Dr. Shapiro, with the cooperation of Dr. A. W. Neilson and Dr. Hollis Allen, write an article for publication in Missouri Medicine, discussing the newer methods of laboratory diagnosis. The State Division of Health requested that we recommend that they receive 1,000 reprints of this article to be available for anyone desiring this information. The Committee also recommends that the State Laboratory revise its information on the back of its reporting slip to include information regarding these newer and more definitive tests.

The Committee would like to bring to the attention of the Council that the cases of primary and secondary syphilis have increased 50 per cent this last year and have increased 170 per cent since 1959. While this is a relatively small number of cases, it continues to be an alarming increase.

Dr. McMillan brought up the inadequacy of the educational program of social hygiene, and Dr. Belden commended the group in Kansas City, headed by Dr. Lloyd Stockwell, for the fine work they have done along this line.

Edwin M. Powell, Chairman,
John E. Byrne,
A. W. Neilson,
T. E. McMillan,
Robert B. Bristow.

The Speaker referred this portion of the supplemental report of the Council to the Reference Committee on Reports of Officers.

Dr. Hollweg: The Committee on Civil Defense Disaster Medical Care recommends that the Missouri State Medical Association go on record as approving the medical self-help program as designed and presented by the United States Public Health Service in cooperation with the American Medical Association.

The Speaker referred this portion of the report to the Reference Committee on Medical Education and Public Welfare.

The Financial Statement which appeared in the Handbook and was published in the March issue of Missouri Medicine was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

The following resolution presented by the Jasper County Medical Society appeared in the Handbook:

Whereas, Members of Jasper County Medical Society, in regular meeting assembled, deem it to the best interests of members of the medical profession in the State of Missouri that the forms usually entitled "Attending Physician's Statement—Accident or Sickness Claim—Group or Individual Insurance" be uniform, and that all insurance companies requesting physicians to complete such forms be required in the State of Missouri to use the same uniform form;

Now therefore, the Jasper County Medical Society, through its delegates, moves that the Missouri State Medical Association, at its Annual Session of 1962, adopt a proper resolution authorizing the officers of the Missouri State Medical Association to take whatever steps deemed necessary to secure enactment of legislation requiring insurance companies to provide "attending physician's" uniform blanks or forms in cases where accident or sickness insurance claims or group or individual claims are involved.

The Speaker referred this resolution to the Reference Committee on Resolutions.

The following resolution presented by the Jasper County Medical Society appeared in the Handbook:

Whereas, Members of Jasper County Medical Society, in regular meeting assembled, deem it to the best interests of the members of the medical profession in the State of Missouri that such members be afforded the opportunity to operate as an association under "Articles of Association" and thereby qualify for income tax treatment as a corporation under the so-called Kintner regulations of the United States Treasury Department; and

Whereas, Missouri statutory law, as it now exists, appears to prevent associations organized in Missouri from qualifying for income tax treatment as corporations under said Kintner regulations;

Now therefore, the Jasper County Medical Society, through its delegates, moves that the Missouri State Medical Association at its Annual Session of 1962 adopt a proper resolution or resolutions authorizing the officers of the Missouri State Medical Association to take whatever steps may be necessary to secure enactment of corrective legislation which would permit associations of professional men to qualify for income tax treatment as corporations under said Kintner regulations.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.

The report of the Committee on Medical Economics, presented in the Handbook, follows:

## REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

As reported elsewhere by this committee, the direction of the House of Delegates to seek full implementation of the Kerr-Mills Law in Missouri was complied with by the introduction of House Bill 690 in the Legislature.

The original cost estimate for full implementation of the law was $107 million in state funds for the biennium, while minimum implementation only was estimated at $5½ million.

In view of the magnitude of these costs, the legislature did not act on the Kerr-Mills law beyond increasing appropriations for the hospitalization program already in effect. Instead, a joint interim committee was created to study the needs of the aged in Missouri for health care programs. This Committee is to report its findings and recommendations to the legislature at the next regular session in 1963.

Despite this delay, the Committee on Medical Economics is impressed with the progress made in implementation of the Kerr-Mills law in Missouri and with the potential inherent in the law. In our opinion, the real needs of those unable to provide financially for their own medical care can be met through this law—and met without undue interference by the federal government in the provision of health care. The Committee urges that the House of Delegates of the Missouri State Medical Association renew its endorsement of the Kerr-Mills principle, that the Association cooperate fully with the study being made by the interim committee of the General Assembly, and that it continue to support further implementation of the law in Missouri.

Another threat to the democratic practice of medicine is imminent in legislation under consideration in Washington such as the King-Anderson proposal. Since this situation requires the immediate action of physicians interested in preserving our present type of practice, the Committee recommends that the individual councilors schedule meetings with their constituents to advise them of the Association's support of the Kerr-Mills program, provide them with the materials, speeches, folders, etc., available through the Executive Office, and urge that individual physicians throughout the state use and disseminate these materials.

G. W. Winn, Chairman,
John R. Forgrave,
Byron E. Watts,
George L. Hawkins,
Martin Hunter,
Kenneth E. Knabb,
E. T. Hansbrough,
Rae W. Froelich.

The Speaker referred this report to the Reference Committee on Miscellaneous Affairs.

The report of the Trustees of the Missouri State Medical Foundation appeared in the Handbook as follows:

## REPORT OF THE TRUSTEES OF THE MISSOURI STATE MEDICAL FOUNDATION

One of the significant new programs developed by the Missouri State Medical Association as a result of its expanded public service program is the "Missouri State Medical Foundation." The Foundation, established by the Council in May 1960, and chartered by the State of Missouri in March 1961, is a nonprofit corporation providing educational loans to medical students who are permanent residents of the state.

The fund commenced actual operation in August 1960, making loans to qualified students enrolled at each of Missouri's three medical schools from an initial appropriation of $25,000 authorized by the MSMA Council. Since that time, two additional $25,000 grants have been made by the Council to replenish the virtually exhausted treasury of the loan fund. To date, therefore, MSMA has furnished a total of $75,000 to the Foundation for student loans.

In addition, the fund has received a gift of $1,500 from one private donor, $100 from another, $100 from the Lincoln-St. Charles County Medical Society, and $50 from the Jefferson County Medical Society. Thus, total assets of the revolving student loan fund now stands at $76,750.

The Foundation's Board of Trustees, before launching a comprehensive program to solicit gifts from private sources, has requested a ruling from the Internal Revenue Service that all contributions made to the loan fund are tax-deductible. As yet the ruling has not been issued, although the Board is hopeful the I.R.S. will take action on the request prior to the MSMA Annual Session.

It is not known, of course, how much money the Foundation can expect to receive from private sources in years to come. The Trustees hope that it will be substantial, running into thousands of dollars in annual gifts. However, there is no assurance that the Foundation's financial situation will be appreciably strengthened as a result of contributions from private donors.

Based on the volume of loan applications received by the fund prior to the start of each school semester thus far, however, it appears certain that the number of applicants and the total amount of financial assistance needed by students to complete their training will continue to increase year by year. At the same time, because of the liberal rules established for repayment of loans, it will be a number of years before any appreciable sums will be returned to the fund and available for release to other students.

The Foundation, as of January 31, 1962, is in a favorable financial condition. It is apparent, however, based on the fund's first 16 months of operation, that unless additional sources of income are forthcoming prior to the school semester which commences next September, present funds available for loan will again be used up and a number of qualified applicants will have to be refused.

Following is a brief summary of operations for the 16-month period ending January 31, 1962:

| | |
|---|---|
| Total assets | $76,750 |
| Total amount of loans granted | $59,480 |
| Cash Balance Available for Loan | $17,270 |
| Total number of loans granted | 122* |
| Average amount of loan granted | $ 487.54 |
| Number of loan applications on hand | 6 |

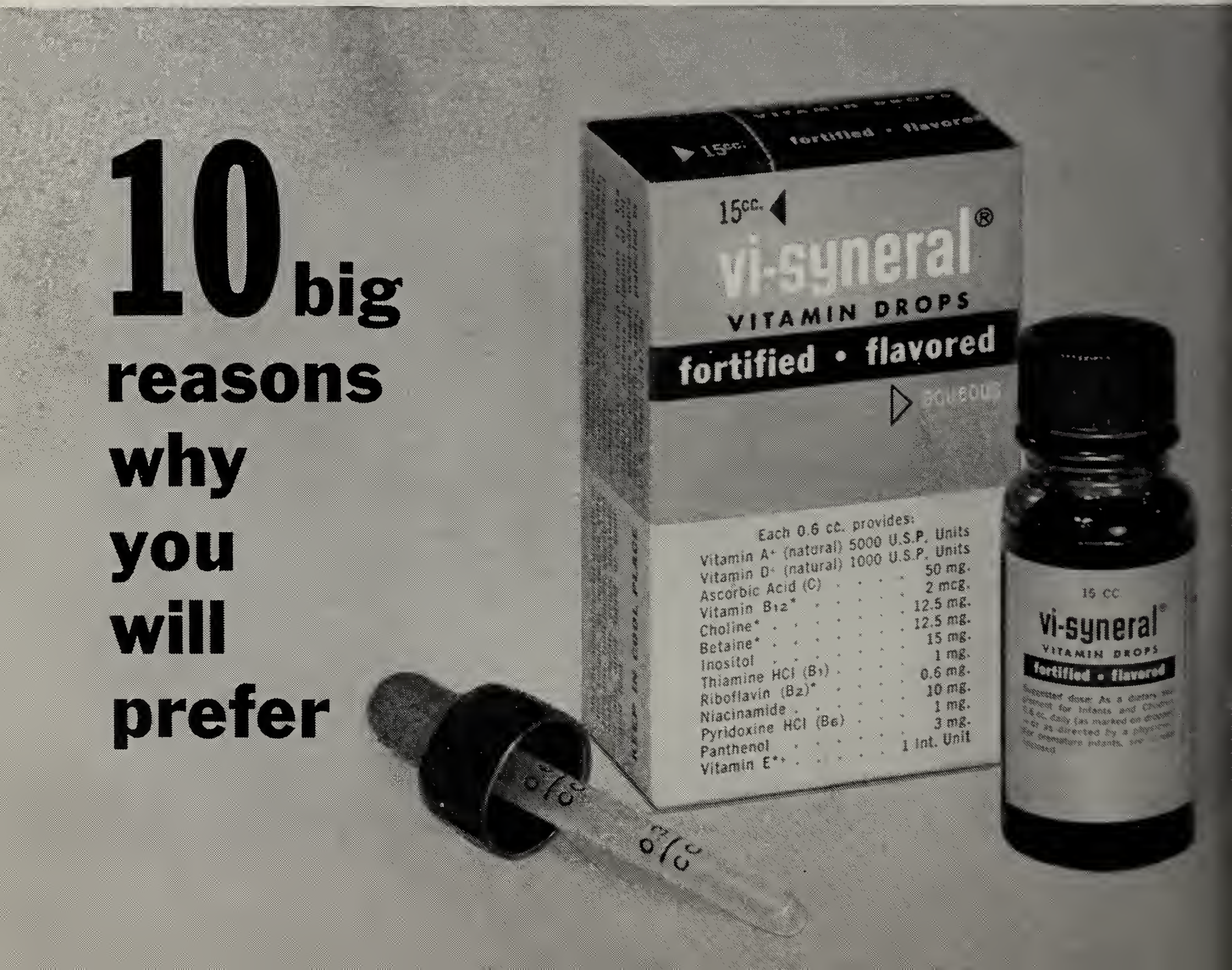
Number of medical students who have received loans, by school:

| | |
|---|---|
| Missouri University | 60 |
| St. Louis University | 7 |
| Washington University | 1 |
| Albert Einstein School of Medicine | 1 |
| Tulane University | 1 |
| Meharry School of Medicine | 1 |
| Baylor University | 1 |
| Total | 72* |

*(Loans are made on a semester or school year need basis and several students have received more than one grant.)

Every physician who is a member in good standing of the Missouri State Medical Association is automatically a member of the Missouri State Medical Foundation. Therefore, in addition to each physician's inherent responsibility for helping young would-be doctors complete their formal medical training, every MSMA member has a vested interest in the success of the loan Foundation. The fund will continue achieving its worthwhile purpose only if all physicians support the Foundation's activities financially and otherwise.

For this reason, the MSMF Board of Trustees is ex-


10 big reasons why you will prefer
15cc.
vi-syneral®
VITAMIN DROPS
fortified • flavored
Each 0.6 cc. provides:
Vitamin A* (natural) 5000 U.S.P. Units
Vitamin D* (natural) 1000 U.S.P. Units
Ascorbic Acid (C) 50 mg.
Vitamin B12* 2 mcg.
Choline* 12.5 mg.
Betaine* 12.5 mg.
Inositol 15 mg.
Thiamine HCl (B1) 1 mg.
Riboflavin (B2)* 0.6 mg.
Niacinamide 10 mg.
Pyridoxine HCl (B6) 1 mg.
Panthenol 3 mg.
Vitamin E** 1 Int. Unit
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tremely hopeful for House of Delegates acceptance of the proposed increase in MSMA dues, since a portion of the revenue derived from such increase will be used to provide additional student loans.

R. O. MUETHER, President,
LEONARD T. FURLOW, Vice-President,
CHARLES R. DOYLE, Secretary-Treasurer,
BEN M. BULL, Trustee,
WALTER W. TILLMAN, Trustee,
KENNETH C. HOLLWEG, Trustee,
J. H. SUMMERS, Ex-Officio, Trustee.

## SUPPLEMENTAL REPORT OF THE MISSOURI STATE MEDICAL FOUNDATION

In accordance with the By-Laws of the Missouri State Medical Foundation, immediately following the Monday session of the House of Delegates of the Missouri State Medical Association an annual meeting of the Foundation will be held. All members in good standing of MSMA—who are thereby members of MSMF—are invited to attend the annual meeting of the Foundation.

Primary business to be transacted at the latter meeting will be the election of members of the Foundation's six-man Board of Trustees. One physician will be elected for a one-year term; one for a two-year term; one for three years, one for four years and two for the full five-year period. In future years, one Trustee will be elected each year for a five-year term.

Also to be named at the annual meeting to the Board of Trustees as Ex-Officio Member will be the incoming President of the Missouri State Medical Association.

A meeting of the newly-constituted Board will convene following adjournment of the annual meeting for the purpose of electing new officers—President, Vice-President, Secretary-Treasurer—for the year 1962-63. All officers serve one-year terms.

**Dr. Bull gave the report of the Committee on Nominations.**

The following excerpts from letter dated January 29, 1962, from the U. S. Treasury Department Re: Missouri State Medical Foundation was included.

Determination Letter Purpose: Charitable and Educational
St. L-EO-62-3
Missouri State Medical Foundation
634 North Grand Avenue
St. Louis 3, Missouri

**vi-syneral vitamin drops fortified** (flavored)

1. provides vitamin $B_{12}$.
2. 100% natural vitamin A complex.
3. 100% natural vitamin D complex.
4. vitamin E to reduce susceptibility of red blood cells to hemolysis.
5. vitamins A, D, and E made aqueous* for far faster and more complete absorption and utilization.
6. vitamin$B_6$ . . . anticonvulsant vitamin.
7. lipotropic agents.
8. other essential B complex factors and vitamin C.
9. delicious fruity flavor.
10. no burps . . . no fish oil taste or odor . . . allergens removed.

*Protected by U.S. Pat. No. 2,417,299 owned and controlled by U. S. Vitamin & Pharmaceutical Corporation

SAMPLES of VI-SYNERAL VITAMIN DROPS FORTIFIED on request

**u. s. vitamin & pharmaceutical corporation**
Arlington-Funk Laboratories, division • 800 Second Ave., New York 17, N.Y.

Gentlemen:

Based upon the evidence submitted, it is held that you are exempt from Federal income tax as an organization described in section 501 (c) (3) of the Internal Revenue Code, as it is shown that you are organized and operated exclusively for the purpose shown above. Any question concerning taxes levied under other subtitles of the Code should be submitted to us.

Contributions made to you are deductible by donors as provided in section 170 of the Code. Bequests, legacies, devises, transfers or gifts to or for your use are deductible for Federal estate and gift tax purposes under the provisions of section 2055, 2106 and 2522 of the Code.

This is a determination letter.

Very truly yours,
Alvin M. Kelley
District Director

The Speaker referred this report to the Reference Committee on Constitution and By-Laws.

J. H. Summers, M.D., Lebanon, President, announced the Committee on Nominations as follows:

### COMMITTEE ON NOMINATIONS

John N. Martin, M.D., St. Joseph.
R. J. Lanning, M.D., Hannibal.
James R. Macnish, M.D., St Louis.
Edgar Davis, M.D., St. Louis County.
G. D. Shull, M.D., Jefferson City.
Donald Giesler, M.D., Osceola.
Charles Wheeler, M.D., Kansas City.
Kenneth Glover, M.D., Mount Vernon.
R. W. Froelich, M.D., Lebanon.
Ben M. Bull, M.D., Ironton, Chairman.

The Speaker: The following amendment to the Constitution has lain on the table for one year. It appears in the Handbook and deals with redistricting. The amendment is "Change Article VII, Section 1, after '. . . and a Vice Speaker of the House of Delegates and ten Councilors selected as provided for.' to read, 'and a Vice Speaker of the House of Delegates and eleven Councilors selected as provided for.' "

On standing vote by a vote of 52 for and 56 against, the Speaker declared the amendment defeated.

The Speaker declared the House of Delegates open for new business.

R. D. Dwyer, M.D., North Kansas City: I have several resolutions to present.

Whereas, The Relative Value Scale is merely a thinly disguised means of establishing a fixed fee; and
Whereas, The Fixed Fee is the Key to Control of the Medical Profession by Special-Interest Lay Group and
Whereas, The Fixed Fee is the essential ingredient in Control by Government Agencies, and
Whereas, The Relative Value Scale is ethically and morally wrong because the individual physician is responsible to, and should bargain with, only his patients, and
Whereas, The Relative Value Scale does not allow for or evaluate experience or training, now, therefore be it
*Resolved,* That the MSMA House of Delegates condemns the use of the Relative Value Scale once and for all as a false and dangerous means of establishing a medical fee in the free enterprise practice of medicine.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Dr. Dwyer: I have the following resolution to present:

Whereas, One of the main pillars of the free enterprise system of medicine which has given to our country the best medical care and service ever known to mankind, is the direct and individual relationship between doctor and patient; and
Whereas, Through this relationship our responsibility is to frankly and freely discuss our fees and special charges with the patient before they are made, and
Whereas, No third party to this relationship, especially non-medically oriented labor barons or compromising insurance companies have any ethical or moral right to interfere and who do so only to take away part or all of the bargaining freedom of one or both original parties, now, therefore, be it
*Resolved,* That the M.S.M.A. House of Delegates go on record as being unalterably opposed to any and all types of third party medicine.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Dr. Dwyer: I wish to present the following resolution:

Whereas, Full payment or service benefits programs be they in a "Shield" plan or other commercial carrier, must embody the principles of Relative Value Scale or Fixed Fee and third party medicine; and
Whereas, Relative Value Scale and or third party medicine are generally recognized as being hazardous to the continuing health of the free enterprise system of medicine, and
Whereas, Full payment or service type benefits are based on the knowledge of an individual's income which in our society is extremely difficult to ascertain, and
Whereas, The compulsory ascertainment of such information encroaches on a man's private affairs which are guaranteed sacred by the Bill of Rights, now therefore be it
*Resolved,* That MSMA House of Delegates disapproves and condemns the full payment or service type benefit plans as alien to the ethical and moral fiber of American Medicine.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Dr. Dwyer: I wish to present the following resolution:

Whereas, Legislation of the King-Anderson type as embodied in H.R. 4222 unrealistically attempts to solve a socio-economic-health problem in a socialistic manner which does not meet the needs of the situation; would be inordinately expensive; would interfere with the doctor-patient relationship; would lead inevitably to further encroachments by government into medical care; would result eventually in a deterioration of the type of medical care rendered the public and is therefore detrimental to the best public interest; and
Whereas, The MSMA House of Delegates emphasizes that the medical profession and only the medical profession can render medical care under any system and that the medical profession is best qualified to determine what is the best medical care and how it can best be delivered; and
Whereas, The MSMA House of Delegates reiterates that the medical profession has always, does now and will continue to see that every person receives the best available medical care regardless of ability to pay, this being rendered according to the system it believes is in the public interest, now, therefore be it
*Resolved,* That the MSMA House of Delegates speaking for all the Doctors of Missouri desire that it be generally known and understood it will not be a willing party to implementing any system which it believes to be detrimental to the public welfare.
That copies of this resolution be forwarded to the President of the United States, to the Senators and Representatives of this Sovereign State of Missouri in the United States Congress, to the Honorable Abraham Ribicoff—Head of Dept. of Health, Education and Welfare and his zealous assistant, Mr. Wilbur Cohen, to the Chairman of the House Ways and Means Committee and to our parent organization, the AMA.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Dr. Dwyer: I wish to present the following resolution:

Whereas, The socialization of our profession has already progressed far beyond what it should be in a free limited republic; and
Whereas, We as physicians have a moral obligation to protect our patients from the inferior care they would receive under further federal government intervention in the free enterprise practice of medicine; and
Whereas, More socialistic laws continue to be passed in spite of overwhelming evidence that the majority of Americans are against such legislation; now, therefore be it
*Resolved,* That the members of MSMA affirm their unanimous opposition to H.R. 4222 (and all similar type legislation that attempts to make medical care a part of the social security law, embodies the compulsory health insurance principle or further undermines the free enterprise system of medicine).

The Speaker referred this resolution to the Reference Committee on Resolutions.

Hector W. Benoit, Jr., M.D., Kansas City: I wish to present the following resolution from the Jackson County Medical Society Delegation:

Whereas, The American Medical Association is composed of both practitioners and academicians and

Whereas, The academicians have many unsolved problems in the area which is exclusively theirs, namely undergraduate medical education and,

Whereas, The membership of the Council on Medical Education and Hospitals has been comprised largely of career academicians whose knowledge of the accomplishments and potentials in the field of postgraduate medical education in private institutions has invariably been limited, and

Whereas, The decisions of the Council on Medical Education and Hospitals in recent years relative to the approval of internships and residency training programs have arbitrarily established requirements not reasonably provided in many private hospitals, thus seriously compromising the availability of good postgraduate medical education training programs, and

Whereas, Many practitioners serve their communities well, as able and qualified instructors, and at the same time benefit from their contacts with younger physicians in the performance of postgraduate educational functions, and

Whereas, These recent decisions of the Council on Medical Education and Hospitals have served to stifle and nullify the teaching efforts and talents of such practitioners, and

Whereas, Such decisions have subsequently lowered the quality of medical care to a large segment of our population by divorcing patient care from postgraduate medical education, therefore be it

*Resolved*, That the House of Delegates of the Missouri State Medical Association recommend to the Delegates to the American Medical Association from Missouri that at the next annual session of the American Medical Association they introduce and support a resolution changing the membership of the Council on Medical Education and Hospitals so that no new university personnel be elected to the Council until a ratio of 6 non-university connected members to 4 university or faculty practitioners is established and this ratio be maintained by any future elections to the Council, and be it further

*Resolved*, That the House of Delegates of the AMA instruct the Council on Medical Education and Hospitals of its desires to perpetuate postgraduate programs of medical education in institutions not necessarily affiliated with medical schools so as to maintain a large degree of diversification in the field of postgraduate medical education and be it further

*Resolved*, That copies of this resolution be forwarded to all Delegates of the AMA in all 50 states and to the presidents of all State Medical Societies or Associations.

The Speaker referred this resolution to the Reference Committee on Medical Education and Public Welfare.

Roland P. Ladenson, M.D., Columbia: I wish to present the following resolution for the Boone County Medical Society:

Whereas, The Missouri State Medical Association is firm in the belief that the private practice of medicine is the cornerstone of good medical care, and

Whereas, The "fee for service" programs place a third party between the patient and the physician, and

Whereas, Such programs are contractual agreements between physicians and pre-paid medical care groups rather than between the physician and the patient, and

Whereas, The Missouri State Medical Association can see little if any difference between a physician contracting with a Blue Shield plan, with a labor union or with a government agency, and

Whereas, Such contracts are possible only when the participating physicians are willing to underwrite an unknown amount of medical care for a fixed premium, and

Whereas, The Missouri State Medical Association believes that a contract for medical care should exist only between the person providing the care and the one who receives it, be it therefore

*Resolved*, That the House of Delegates of the Missouri State Medical Association should reject the principle of determination of the "total fee for service" by any third party, and be it further

*Resolved*, That the decision to accept indemnity payments as a total fee rest with the physician who supplies the service.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Edward D. Kinsella, M.D., St. Louis: I wish to present the following resolution:

Whereas, There is a need to stress the mutual efforts between Blue Shield and the medical societies concerned, and

Whereas, There is a need to give greater importance to the role the medical society is to play, and

Whereas, There is a need to obviate a conflict arising from MSMA approval of the Blue Shield's development of a plan and its subsequent rejection by the physicians concerned with the resultant adverse publicity, and

Whereas, This motion is in keeping with the method used by Blue Shield to solicit medical opinion prior to submitting its request to MSMA, therefore be it

*Resolved*, That the House of Delegates of the Missouri State Medical Association hereby approve and encourage the development by Missouri Medical Service for a combination service indemnity program of "the usual, customary and reasonable fee" type in close conjunction and cooperation with the involved medical societies in the development of the mutually acceptable plan to be submitted to the physicians of their areas for consideration, and be it further

*Resolved*, That the plan must meet with local medical society approval before being submitted to the physicians at large.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.

John F. Bowser, M.D., Kansas City: I wish to present the following resolution from the Jackson County Medical Society Delegation:

Whereas, The private insurance industry has organized the Health Insurance Council dedicated to the representation of the nation's insurance companies in the areas of health insurance, health care economics, and in its relationship with doctors, hospitals, and other medical care groups, and

Whereas, The medical profession is not represented in an advisory capacity on the Health Insurance Council, therefore, be it

*Resolved*, That the Missouri State Medical Association requests the American Medical Association to establish appropriate liaison with the Health Insurance Council to develop better methods of settling differences of opinion concerning individual fees in individual cases between the private insurer and the physician with the purpose of avoiding embarrassment to either party and providing improvement of the public relations of each group.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.

Hugh E. Stephenson Jr., M.D., Columbia: I wish to present the following resolution:

Whereas, The Missouri State Medical Association believes the need for subsidized medical care for citizens over 65 has been greatly exaggerated and

Whereas, The Missouri State Medical Association believes that the physicians and other health agencies of Missouri are earnestly striving to meet the needs of this segment of the population, and

Whereas, The implementation of the Kerr-Mills legislation would facilitate this care through existing agencies, and

Whereas, The Missouri State Medical Association believes that any contract for medical care should exist only between the physician and the patient, be it therefore

*Resolved*, That the House of Delegates of the Missouri State Medical Association reject the American Medical Association plan for a special "fee for service" Blue Shield program for the aged, and be it further

*Resolved*, That the House of Delegates of the Missouri State Medical Association approve a special Blue Shield Indemnity Program for the Aged and be it further

*Resolved*, That this resolution be presented to the House of Delegates of the American Medical Association.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.

George Hawkins, M.D., St. Louis: I wish to present the following resolution:

Whereas, In any health insurance program, safeguards must be provided, in order to protect the insurer, the insured and the physician, and

Whereas, A deductible health insurance program fulfills these qualifications, and

Whereas, Physicians are dispensers of medical service and not insurance actuaries, be it hereby

*Resolved*, That this annual meeting of the Missouri State House of Delegates of the MSMA go on record as recommending that all insurance companies make available to purchasers of health insurance a deductible-type policy, and that the Missouri State Medical Association make the same guarantees of faithful service to any and all reputable insurance companies offering such policies.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.

Dr. Joseph C. Peden, St. Louis, reported for the Credentials Committee that there were present five officers, nine councilors and 110 delegates.

There being no further business, the session recessed at 3:15 p.m.

### Monday, March 19, 1962

The House of Delegates convened at 4:00 p.m. in the Khorassan Room, Hotel Chase, St Louis, with William C. Mixson, M.D., Kansas City, Speaker, presiding.

Joseph C. Peden, M.D., St. Louis, reported for the Committee on Credentials, as follows: There are present seven officers, 10 councilors and 124 delegates.

Dr. Frank R. Daley, Hamilton, reported for the Reference Committee on Constitution and By-Laws.

## REPORT OF THE REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

The Reference Committee on Amendments to the Constitution and By-Laws met at 3:30 p.m., Park Room, Hotel Chase, on March 18, 1962. The following members were present: Drs. Frank R. Daley, Chairman; John A. Griffith, Don C. Weir, Thomas Macdonnell and F. L. Kozal.

The Financial Report was approved unanimously by the Committee.

The Report of the Student Loan Fund was adopted unanimously along with the dues increase of members of the Missouri State Medical Association, and recommendation was made to amend the By-Laws as follows: Amend Chapter VIII, page 8 of the By-Laws, Section 1, line 2, by striking out the figure "$35.00" and inserting in lieu thereof the figure "$50.00." Further amend Chapter VIII, page 8 of the By-Laws, Section 2, by adding the following sentence after the period in line 3: "Seven and one half dollars of the annual dues of active members and three dollars and seventy-five cents of the annual dues of junior members shall be paid annually by the Treasurer to the Missouri State Medical Foundation."

Mr. Speaker, I move the adoption of this portion of the report.

Following second, Dr. David N. Kerr, St. Louis, offered an amendment to the report designating that the $7.50 and the $3.75 of the increase in dues earmarked to go to the Foundation be an assessment for three years.

This was discussed by Drs. Kerr, F. L. Kozal, Thomas Macdonnell, Hector W. Benoit Jr., Oscar P. Hampton, John N. Martin, Joseph B. Kendis, Kenneth Glover and Joseph C. Peden.

On standing vote the amendment was adopted.

That portion of the report, on second, was adopted as amended.

The Report of the Public Service Committee was approved *in toto* as written including the proposal to amend the By-laws by eliminating the standing Committees on Public Policy and Public Relations and Health and Public Instruction and by creating a new standing Committee on Public Service. It is further recommended that the Report of General Mobilization be included in this report and approved also.

The Report of the Committee on Health and Public Instruction was unanimously approved by the Committee and it is recommended that it be adopted.

Mr. Speaker, I move that this portion of the report be adopted.

On second, this portion of the report was adopted.

On motion, duly seconded, the amended report was adopted as a whole, and the amendments to the recommended By-law changes were laid on the table for a day.

Dr. Gerald Miller, Kansas City, reported for the Reference Committee on Miscellaneous Affairs.

## REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

The Reference Committee on Miscellaneous Affairs met at 3:45 and again at 8:30 p.m., on Sunday, March 18, 1962, in the Hunt Room of the Chase Hotel, St. Louis, with all members present.

The Reference Committee on Resolutions meeting.

The Committee considered the resolution of delegate Hawkins of the St. Louis Medical Society on Deductible Health Insurance. After discussion, the Committee agreed to reject this resolution and submits the following substitute resolution:

Whereas, In any health insurance program, safeguards must be provided in order to protect the insurer, the insured and the physician, and

Whereas, In the face of these necessary safeguards, increased flexibility of health insurance programs is desirable and should be developed, therefore, be it hereby

*Resolved*, That this annual meeting of the House of Delegates of the Missouri State Medical Association go on record as endorsing the development by all insurance companies of a deductible type health insurance program.

On second, this portion of the report was adopted.

The Committee considered the resolution submitted by delegate Bowser of the Jackson County Medical Society regarding AMA-Health Insurance Council Liaison and accepts the resolution *in toto*, as submitted, and recommends its approval.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

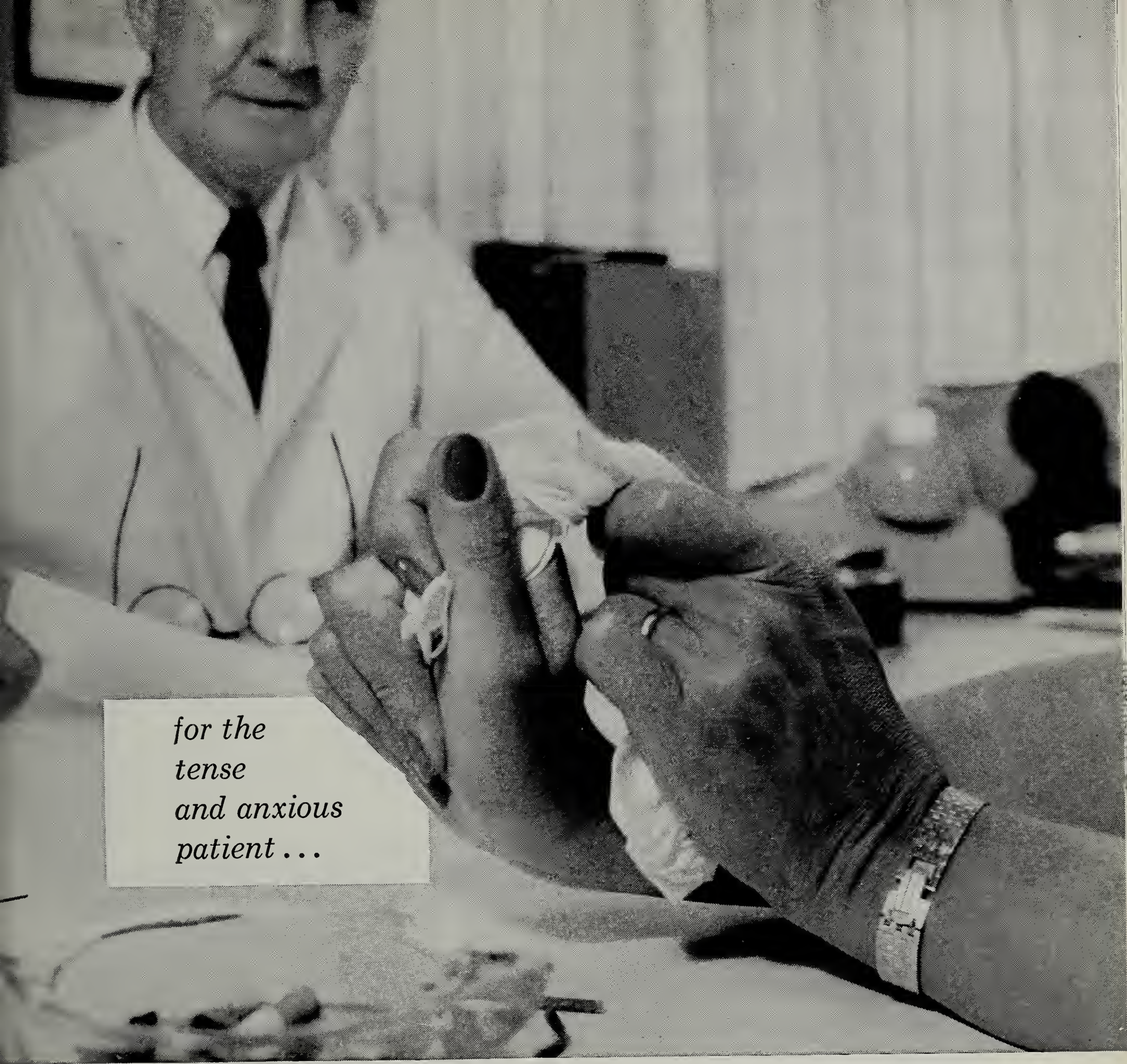
The resolution submitted by delegate Stephenson of the Boone County Medical Society regarding the AMA Blue Shield Plan was considered and the Committee agreed to reject this resolution in view of the apparent incomplete development of the AMA Blue Shield Plan at its inception and that the benefits and total scope of care and costs have not been ascertained. Therefore, the Committee recommends that this resolution be not approved.

I move the adoption of this portion of the report.

Following second, this was discussed by Drs. A. W. Neilson, Gerald L. Miller, R. D. Dwyer, Robert S. Kingsland.

On vote, this portion of the report was adopted.

The Committee has reviewed the report of the Committee on Corporate Practice including consideration of professional associations of the Kintner type, has also read and evaluated the report of the Attorney General provided on March 15, and as presented by the Committee on Corporate Practice, and recommends approval of the Committee Report and suggests further study of the problem of corporate practice by the Committee on Corporate Practice for additional development and subsequent evaluation by the Council.



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The Reference Committee encourages the Council to take definitive action on this prior to the reconvening of the legislature in 1963, and suggests that no associations of the Kintner type be organized before such action by the Council.

The Committee did briefly consider the Kintner resolution submitted by the Jasper County Medical Society, which has been withdrawn by that group.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee reviewed the resolution adopted by the 1961 House of Delegates concerning relations between the Missouri State Medical Association and the Missouri Hospital Association and the subsequent report of the Committee on Corporate Practice concerning this resolution and recommends the approval of this report.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Report of the Committee on Medical Economics was reviewed by the Committee and its adoption, as published, is recommended.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee considered the Report of the Council on the AMA-National Blue Shield Over-65 Plan. The Committee accepts the report of the Council on the AMA-National Blue Shield Over-65 Plan and recommends its approval.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee considered the Report of the Council on the St. Louis Blue Shield Plan. After much discussion, the Reference Committee disapproves the report as printed. The Committee then submits the following substitute report.

The name, St. Louis Blue Shield Plan, is to be deleted from the report and replaced by Missouri Medical Service Plan since this is the legal corporate title. Furthermore, since on May 1, 1945, after due action of the House of Delegates, a check in the amount of $5.000 from the Missouri State Medical Association was given to the Board of Trustees for the development of the Missouri Medical Service Plan, therefore, the Reference Committee considers this resolution to be of major concern of the House of Delegates of this 104th Annual Session of the Missouri State Medical Association.

Finally, in the last paragraph of page 3 of the report in the Delegates Handbook, the words "concurs in" is to replace the words, "approves and encourages." Further, the revised paragraph is completed by, "indemnity-full coverage program by the Missouri Medical Service Plan for study and evaluation by the physicians of its area for their consideration and expression of approval or disapproval."

Mr. Speaker, the chairman now presents the report with the corrections as follows:

For more than six years, the automobile industry has had labor contracts with its employees calling for paid-in-full hospital and medical surgical benefits for workers earning $7,500 a year or less.

During this time, the companies have depended upon Blue Cross and Blue Shield for such protection. In indemnity areas such as Missouri Medical Service, however, full payment benefits have not been available.

In 1961 contract negotiations the automobile companies agreed to pay the full cost of health protection for their employees. Together, they are now making an insistent effort to obtain full coverage protection and the predictability of medical costs which this affords. (Many other prominent groups also have expressed strong desires for this kind of coverage through the years.)

In October of 1961, Missouri Medical Service executives were told by officers of the General Motors, Ford and Chrysler companies that unless the plan could furnish a full-payment program early in 1962 the automobile industry memberships would be withdrawn. In this connection, the automobile company Blue Shield memberships in Illinois and Ohio have already been cancelled and replaced by a special experimental commercial insurance company program.

There are some 55,000 automotive workers and their dependents enrolled in Missouri Medical Service Plan. This is the largest group in the Plan, constituting almost 9 per cent of the total enrollment. Needless to say, loss of this group would have serious adverse effects on the Plan.

In this situation, however, Blue Shield has not advocated any particular course. Instead it has attempted to determine the attitude of the medical profession and be guided by physician opinion.

At a meeting of the Blue Shield-County Medical Societies Liaison Committee in November, to which the presidents of all local medical societies in the Missouri Medical Service Plan area were invited, Blue Shield was asked to present the problem to local societies for their recommendations as to whether a specific indemnity-full coverage program should be developed and submitted to the physicians of the area for their approval or disapproval.

On the basis of the response to this query—15 of the 16 societies replying recommended development of a specific program for the consideration of physicians—the Board of Trustees of Missouri Medical Service Plan has directed the development of such a proposal, and work is now under way.

These steps have been reported to the automobile companies, and they have agreed to delay cancellation of their groups for a limited time, meanwhile accepting an improved indemnity program for the interim.

The Council believes that the Trustees, officers and staff of Missouri Medical Service are to be commended on the manner they have proceeded in this matter. At the same time, it believes the Plan, which was formed and continued under the sponsorship of the Missouri State Medical Association, deserves a clear statement of the position of the House of Delegates on the principle of a full-payment program. In the Council's judgment, the time has come when the medical profession of Missouri must decide whether or not it favors or is unalterably opposed to full-payment or service benefits programs for the Missouri Medical Service Plan.

The Council therefore proposes the following resolution:

*Resolved*, That the House of Delegates of the Missouri State Medical Association hereby concurs in the development of a specific and detailed combination indemnity-full coverage program by the Missouri Medical Service Plan for study and evaluation by the physicians of its area for their consideration and expression of approval or disapproval.

The Committee, with one dissenting vote, recommends approval of this substitute report.

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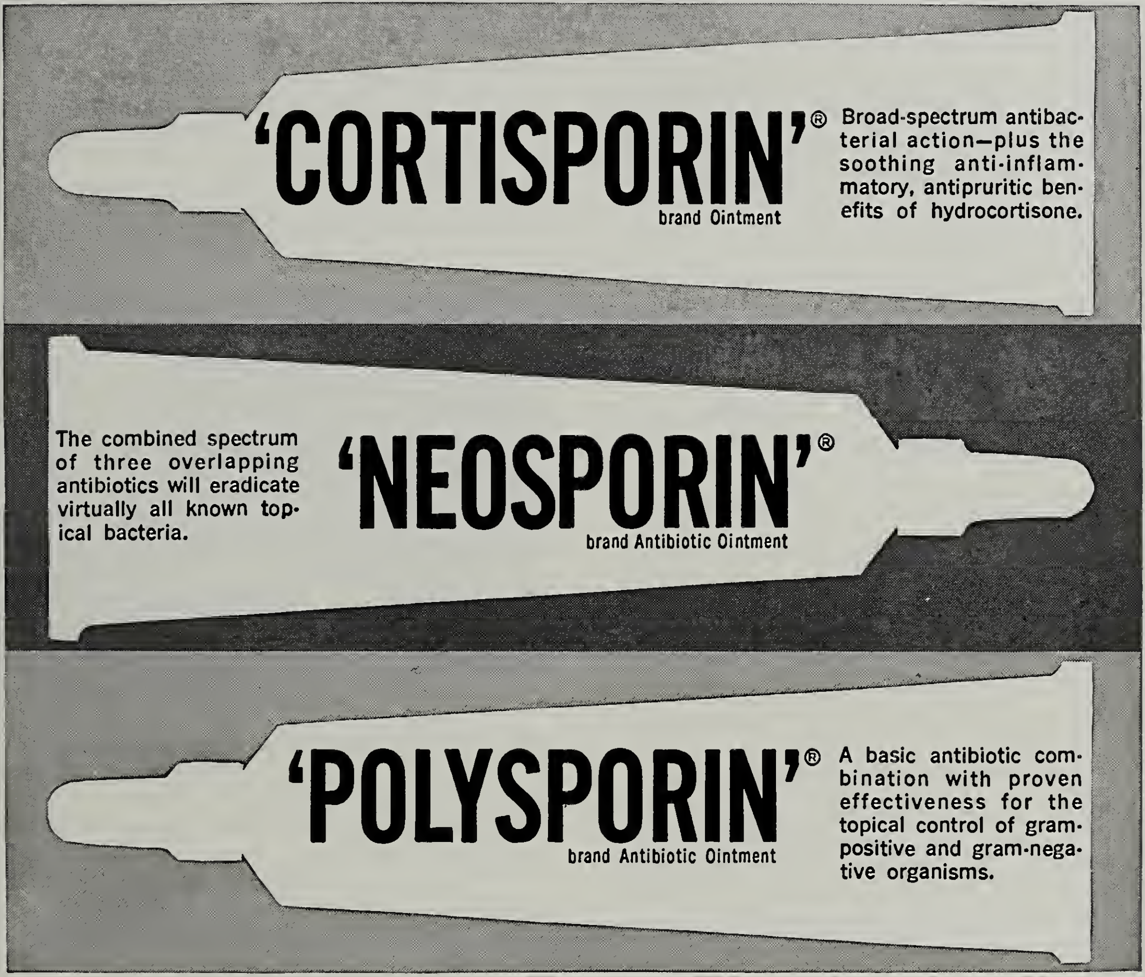

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Mr. Speaker, I move the adoption of this portion of the report.

The motion was duly seconded. This was discussed by Drs. Paul Max, R. D. Dwyer, George Wulff, Benjamin N. Jolly, Robert C. Kingsland, Fred J. Biggs, Jr., A. W. Neilson, Hector W. Benoit Jr., E. V. Henschel, Oscar P. Hampton and Jerome Simon.

On standing vote this portion of the report was adopted by a vote of 80 to 26.

The Committee considered the Resolution presented by Dr. Kinsella and recommends approval of this resolution as corrected. The corrected resolution is as follows:

> *Resolved,* That the House of Delegates of the Missouri State Medical Association hereby concurs in the development by Missouri Medical Service of a combination service indemnity program of "the usual, customary and reasonable fee" type in close conjunction and cooperation with the involved medical societies in the development of a mutually acceptable plan to be submitted to the physicians of their areas for consideration, and be it further
>
> *Resolved,* That the plan must meet with local medical society approval before being submitted to the physicians at large.
>
> The purpose of this change is
>
> 1. To stress the need for mutual effort between Blue Shield and the medical societies concerned.
> 2. To give greater importance to the role the medical society is to play.
> 3. To obviate a conflict arising from MSMA approval of Blue Shield's development of a plan and its subsequent rejection by the physicians concerned with the resultant adverse publicity.

This motion is in keeping with the method used by Blue Shield to solicit medical opinion prior to submitting its request to MSMA.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee also considered the Report of the Committee on Medical Economics published in the Report of the Council on page 641, and recommends approval of this report as published.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The following reports were also considered by the Committee, Report of the Committee on Physical Medicine and Rehabilitation, Committee on Industrial Health, and the Report of the Committee on Medical Economics, published in the Delegates Handbook. All of these reports were approved as published.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Report of the Committee on Aging as published in the Report of the Council (page 616), was approved by the Committee with one slight correction, as follows: The second last paragraph on page 31, "A Statement favoring H.R. 4222 was presented by Dr. E. J. Becker," should read, "A Statement favoring H.R. 4222 was presented by Dr. Edward Berger, St. Louis County, as spokesman for the Group Health Association of America." Also, in the next sentence, "Dr. Berger is Medical Director of Labor Health Institute of St. Louis."

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee also considered the Report of the Committee on Aging as published in the Report of the Council on page 616, and approved this report as published.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Report of the Committee on Mental Health, as published in the Reports of Officers and Committees, was considered by the Committee. The Committee wishes to point out that there is an unsatisfactory disposition of the resolution of Dr. R. D. Dwyer of Clay County submitted at the 1961 session of the House of Delegates, and recommends that this resolution be returned to the Committee on Mental Health for appropriate action. With the exception of this resolution, the Committee recommends the approval of this report.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Report of the Committee on Public Policy and Public Relations was considered by the Reference Committee. In view of the discussion with Dr. Edwards, Delegate from the Third District, it is suggested that the Committee on Public Policy and Public Relations submit a supplemental report to the House of Delegates to more completely define its activities.

I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

Mr. Speaker, I now move the adoption of this report *in toto.*

On second, the report of the Committee was adopted.

Dr. C. W. Cooper, Thayer, presented the Report of the Reference Committee on Reports of Officers.

## REPORT OF REFERENCE COMMITTEE ON REPORTS OF OFFICERS

The Reference Committee on Reports of Officers met in the Colonial A Room at Hotel Chase at 4:15 p.m., March 18, 1962. All members were present.

The address of the President, Dr. J. H. Summers, was unanimously approved.

The address of the President-Elect, Dr. Donald M. Dowell, was unanimously approved.

The reports of the Secretary and Treasurer were approved as published. The budget for the year 1962, totaling $198,077.00 was also approved.

The report of the Council as published, including the meeting of January 20-21, 1962, was accepted.

We thank the Woman's Auxiliary for the work they have done in surveying the health resources in the state and suggest to the Council that they request a written report from the Woman's Auxiliary on the results of their survey, as completed to date, that the results can be published as appear indicated. If further information seems desirable, the Council might then investigate the possibility of a professional survey with funds which are said to be available for this purpose.

This Committee commends the Woman's Auxiliary for the fine work they have done for their Student Loan Fund. It is recommended to the Council that it suggest to the Board of Trustees of the Missouri State Medical Foundation that they invite the Auxiliary Medical Student Loan Fund Chairman to meet with them for the purpose of developing closer cooperation and correlation of their mutual efforts.

The Committee approves the report of the Committee on Laboratory Medicine and also the supplementary report of the Council relative to the Control of Venereal Disease.

Mr. Speaker, I move the adoption of this report.

On second, the report was adopted.

Dr. Charles Miller, Jr., Kirkwood, presented the report of the Reference Committee on Medical Education and Public Welfare.

## REPORT OF THE REFERENCE COMMITTEE ON MEDICAL EDUCATION AND PUBLIC WELFARE

The Reference Committee on Medical Education and Public Welfare met at 4:45 p.m. on March 18, 1962, in the Embassy Room, Hotel Chase. The following were present: Charles Miller, Jr., Chairman, R. W. Stockton, W. M. Lonergan, Gregory A. Schulte and Charles E. Carleton Jr.

It is recommended that the published reports of the following standing and special committees be adopted: Scientific and Postgraduate Work, Publications, Medical Education and Hospitals, Maternal Welfare, Infant and Child Care, Tuberculosis, Trauma, Eye Health, Diabetes, Hospital and Professional Relations, Radiology and Ionizing Radiation, Rural Medical Service and American Medical Education Foundation.

**The Reference Committee on Medical Education and Public Welfare.**

On motion of Dr. Miller, duly seconded, this portion of the report was adopted.

The following resolution was introduced at the request of the Committee on Civil Defense Disaster Medical Care:

The Committee on Civil Defense Disaster Medical Care recommends that the Missouri State Medical Association go on record as approving the medical self-help program as designed and presented by the U. S. Public Health Service in cooperation with the American Medical Association and approved by the Council of MSMA, March 18, 1962.

The Committee approved this resolution.

On motion of Dr. Miller, duly second, this portion of the report was adopted.

The next resolution was introduced by the Jackson County delegation and was studied:

Whereas, The American Medical Association is composed of both practitioners and academicians and

Whereas, The academicians have many unsolved problems in the area which is exclusively theirs, namely undergraduate medical education and,

Whereas, The membership of the Council on Medical Education and Hospitals has been comprised largely of career academicians whose knowledge of the accomplishments and potentials in the field of postgraduate medical education in private institutions has invariably been limited, and

Whereas, The decisions of the Council on Medical Education and Hospitals in recent years relative to the approval of internships and residency training programs have arbitrarily established requirements not reasonably provided in many private hospitals, thus seriously compromising the availability of good postgraduate medical education training programs, and

Whereas, Many practitioners serve their communities well, as able and qualified instructors, and at the same time benefit from their contacts with younger physicians in the performance of postgraduate educational functions, and

Whereas, These recent decisions of the Council on Medical Education and Hospitals have served to stifle and nullify the teaching efforts and talents of such practitioners, and

Whereas, Such decisions have subsequently lowered the quality of medical care to a large segment of our population by divorcing patient care from postgraduate medical education, therefore be it

*Resolved,* That the House of Delegates of the Missouri State Medical Association recommend to the Delegates to the American Medical Association from Missouri that at the next annual session of the American Medical Association they introduce and support a resolution changing the membership of the Council on Medical Education and Hospitals so that no new persons with any medical school affiliation be elected to the Council until a ratio of six non-university connected members to four university or faculty practitioners is established and this ratio be maintained by any future elections to the Council, and, be it further

*Resolved,* That the House of Delegates of the American Medical Association instruct the Council on Medical Education and Hospitals of its desires to perpetuate postgraduate programs of medical education in institutions not necessarily affiliated with medical schools so as to maintain a large degree of diversification in the field of postgraduate medical education and be it further

*Resolved,* That copies of this resolution be forwarded to all Delegates of the A.M.A. in all 50 states and to the presidents of all State Medical Societies or Associations.

The Committee approved this resolution.

On motion, duly seconded, this portion of the report was approved.

On motion, duly seconded, the report as a whole was approved.

Dr. Richard W. Yore, St. Louis, gave the report of the Reference Committee on Resolutions.

## REPORT OF THE REFERENCE COMMITTEE ON RESOLUTIONS

The meeting of the Reference Committee on Resolutions of the Missouri State Medical Association was held at 4:30 p.m. on Sunday, March 18, 1962, in the English Room, Hotel Chase, St. Louis, Missouri, with the following members present: Drs. Richard W. Yore, Chairman, John Martin, C. G. Stauffacher, A. E. McDermitt and Landis Y. Davis.

The meeting was called to order by R. W. Yore. The first order of business was the reading of eight resolutions submitted from the floor of the House of Delegates.

Upon motion duly made and seconded, it was unanimously voted that the following resolution be adopted:

### KING-ANDERSON RESOLUTION

Whereas, The Congress of the United States has under consideration H.R. 4222 and S. 909, known as the King-Anderson bills, along with similar proposals for compulsory health care programs using the Social Security system for taxation and provision of benefits, and

Whereas, Institution of such programs for any particular group of the population, such as the aged, will inevitably bring about extension to other groups, so that eventually all citizens will be under a Federally controlled plan of socialized medicine, and

Whereas, Such programs must unquestionably, result in tremendously increased costs for health care and a deterioration in the quality of that care, and

Whereas, Voluntary private methods for the financing of health care costs now in existence or under development are more than adequate to solve the problems of providing for the expense of health services for the nation's population, including the aged, and are vastly superior to the Social Security plans proposed, therefore be it

*Resolved*, That the physicians of Missouri, through the House of Delegates of the Missouri State Medical Association, hereby reaffirm their opposition to compulsory health care programs for the aged or any other groups of the population provided and administered under the Federal Social Security system, and, be it further

*Resolved*, That copies of this resolution be forwarded to the President of the United States and to the members of the Congress from the State of Missouri.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was approved.

Seven other resolutions were considered after discussion, pro and con, and it was unanimously decided that these resolutions not be adopted in their present form.

Dr. Yore moved that the report as a whole be accepted and the motion was seconded. Several delegates asked for further information on the resolutions.

Dr. Yore: The Jasper County Medical Society resolution was concerning insurance forms, and I will quote: "Now therefore the Jasper County Medical Society, through its delegates, moves that the Missouri State Medical Association, at its annual session of 1962, adopt a proper resolution authorizing the officers of the Missouri State Medical Association to take whatever steps deemed necessary to secure enactment of legislation requiring insurance companies to provide attending physicians uniform blanks or forms in cases where accidents or sickness insurance claims or group or individual claims are involved."

It was felt that there are insurance forms that are available and have been used that are readily accepted by insurance companies and it was felt that enactment of legislation to require insurance companies to do this, since they already of their own volition in most instances have submitted a form, which I think was printed in the *JAMA* years ago, we felt it was not worthy of approval.

I, therefore, move that this resolution be not adopted in its present form.

On second, the motion was carried.

Dr. Yore: The next resolution is from the Boone County Medical Society, as follows:

Whereas, The Missouri State Medical Association is firm in the belief that the private practice of medicine is the cornerstone of good medical care, and

Whereas, The "fee for service" programs place a third party between the patient and the physician, and

Whereas, Such programs are contractual agreements between physicians and pre-paid medical care groups rather than between the physician and the patient, and

Whereas, The Missouri State Medical Association can see little if any difference between a physician contracting with a Blue Shield plan, with a labor union or with a government agency, and

Whereas, Such contracts are possible only when the participating physicians are willing to underwrite an unknown amount of medical care for a fixed premium, and

Whereas, The Missouri State Medical Association believes that a contract for medical care should exist only between the person providing the care and the one who receives it, be it therefore

*Resolved*, That the House of Delegates of the Missouri State Medical Association should reject the principle of determination of the "total fee for service" by any third party, and be it further

*Resolved*, That the decision to accept indemnity payments as a total fee rest with the physician who supplies the service.

Dr. Yore moved that this resolution be not adopted and, on second, the motion was carried.

Dr. Yore: The next resolution reads as follows:

Whereas, The Relative Value Scale is merely a thinly disguised means of establishing a fixed fee, and

Whereas, The Fixed Fee is the Key to Control of the Medical Profession by Special-Interest Lay Group, and

Whereas, The Fixed Fee is the essential ingredient in Control by Government Agencies, and

Whereas, The Relative Value Scale is ethically and morally wrong because the individual physician is responsible to, and should bargain with, only his patients, and

Whereas, The Relative Value Scale does not allow for or evaluate experience or training, now, therefore, be it

*Resolved*, That the MSMA House of Delegates condemns the use of the Relative Value Scale once and for all as a false and dangerous means of establishing a medical fee in the free enterprise practice of medicine.

Dr. Yore: You have the Committee's recommendation that this resolution do not pass and I so move. On second, the motion was carried.

Dr. Yore: The next resolution reads as follows:

Whereas, Full payment or service benefits programs be they in a "Shield" plan or other commercial carrier, must embody the principles of relative value scale or fixed fee and third party medicine, and

Whereas, Relative value scale or third party medicine are generally recognized as being hazardous to the continuing health of the free enterprise system of medicine, and

Whereas, Full payment or service type benefits are based on the knowledge of an individual's income which in our society is extremely difficult to ascertain, and

Whereas, The compulsory ascertainment of such information encroaches on a man's private affairs which are guaranteed sacred by the Bill of Rights, now therefore be it

*Resolved*, That MSMA House of Delegates disapproves and condemns the full payment or service type plans as alien to the ethical and moral fiber of American medicine.

On motion of Dr. Yore, duly seconded, this resolution was disapproved.

Dr. Yore: The next resolution reads as follows:

Whereas, The socialization of our profession has already progressed far beyond what it should be in a free limited Republic, and

Whereas, We as physicians have a moral obligation to protect our patients from the inferior care they would receive under further Federal Government intervention in the free enterprise practice of medicine, and

Whereas, More socialistic laws continue to be passed in spite of overwhelming evidence that the majority of Americans are against such legislation, now therefore be it

*Resolved*, That the members of MSMA affirm their unanimous opposition to H.R. 4222 (and all similar type legislation that attempts to make medical care a part of the social security law, embodies the compulsory health insurance principle or further undermines the free enterprise system of medicine).

It was suggested that a motion be made to substitute the resolution presented by the Council, and adopted by the Committee and the House, for the resolution just presented.

Hector W. Benoit Jr., M.D., Kansas City: May I request a substitute motion, Mr. Speaker, that this portion of the report be referred back to the Committee for final report tomorrow.

Upon parliamentary advice, the motion was changed to refer the report of the Committee back to the Committee for a report at the next session. On second, this motion was passed.

Dr. F. J. Biggs, Poplar Bluff, gave the report of the Reference Committee on Necrology.

## REPORT OF THE REFERENCE COMMITTEE ON NECROLOGY

The Reference Committee on Necrology met in the Colonial Room of Hotel Chase at 4:45 p.m., Sunday, March 18, 1962, with all members present. The following resolution is presented to the House of Delegates:

Whereas, Each member makes his or her contribution to organized medicine in his own way, and

Whereas, Each member who is lost through death is missed by the profession, both personally and for his work with the Association, and is mourned for both reasons, therefore be it

*Resolved*, That 104th House of Delegates expresses its sorrow

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**The Reference Committee on Necrology.**

over the death of 74 of its members during the last year, the names of whom are appended to this resolution, and be it further

*Resolved*, That the Association continue to send to the bereaved families the "In Memoriam Perpetuam," and be it further

*Resolved*, That in the minutes of this House of Delegates covering the 104th Annual Session we record and express our deep personal sorrow for the loss of our fellow members.

Mr. Speaker, I move the adoption of this report and move that the members of the House of Delegates stand in respectful memory for one moment.

On second the motion was adopted and the delegation stood.

### Members Deceased Since the 1961 Session

Johnson, Edgar W., M.D., Kansas City
York, William B., M.D., Sarcoxie
Douglas, John W., M.D., Joplin
Comboy, Lawrence J., M.D., Independence
Martin, Charles E., M.D., Ferguson
Geraughty, Edward, M.D., Liberty
Allen, Charles E., M.D., Kansas City
Kirchner, Walter C. G., M.D., St. Louis
Castles, John E., M.D., Kansas City
Steiner, Albert S., M.D., St. Louis
Riley, Frederick P., M.D., Perryville
Roundy, Collis I., M.D., St. Joseph
Lamson, Roy C., M.D., Neosho
Brockelmann, Erich, M.D., University City
Gay, Elmer E., M.D., Richmond
Walden, James H., M.D., Kansas City
Plag, Albert F., M.D., St. Louis
Alberty, Omer L., M.D., Carl Junction
Jones, Edward E., M.D., Lilbourn
McNearney, Joseph A., M.D., St. Louis
Shepherd, Charles R., M.D., St. Louis
Sausville, Albert J., M.D., St. Louis
Hall, Robert G., M.D., St. Louis
Randall, Leslie C., M.D., Licking
Breid, Jacob, M.D., Spickard
Lau, Gustav A., M.D., St. Joseph
Lucas, John H., M.D., Brookfield
McGlothlan, Arthur B., M.D., St. Joseph
Robichaus, Eugene C., M.D., Excelsior Springs
Wright, George W., M.D., Webb City
Anderson, Axel I., M.D., Kansas City
Bell, Charles T., M.D., Maryville
Grantham, Samuel A., Jr., M.D., Joplin
Owens, Michael J., M.D., Kansas City
Sexauer, Arthur E., M.D., Ste. Genevieve
Shrader, E. Lee, M.D., St. Louis
Wilhelmi, Otto J., M.D., St. Louis
Luckey, Horace L., M.D., St. Louis
Ayars, Treston R., M.D., St. Louis
Mills, Warren B., M.D., St. Louis
Kelley, Walter L., M.D., St. Louis
McCanse, Raymond A., M.D., Kansas City
Altringer, Mary P., M.D., Kansas City
Fries, William A., M.D., St. Louis
Holdenreid, William E., M.D., St. Louis
Irwin, W. F., M.D., Leasburg
Kinner, Helmuth M., M.D., St. Louis
McNamee, William F., M.D., St. Louis
Schlueter, Newell W., M.D., Ladue
Drews, Leslie C., M.D., Clayton
Unterberg, Hillel, M.D., Clayton
Bland, Warren W., M.D., Vandalia
Green, Robert S., M.D., Kennett
Hoefer, Walter H. V., M.D., St. Louis
Major, Hermon S., M.D., Kansas City
Norman, Robert M., M.D., Ava
Pickrell, Claude D., M.D., St. Louis
Singleton, J. Milton, M.D., Kansas City
Zeitler, Walter A., M.D., St. Louis
Laning, J. Halcomb, M.D., Stoneham, Mass.
Valentine, Herbert S., M.D., Kansas City
Nelson, Charles S., M.D., Westphalia, Kansas
Doan, Deborah, M.D., Trenton
Stokes, Julius B., M.D., Excelsior Springs
Grosskreutz, Joseph A., M.D., St. James
Schmiemeier, Herman A., M.D., St. Louis
Black, Mervin H., M.D., Joplin
Irland, Robert D., M.D., Kansas City
Curran, Edward J., M.D., Kansas City
Morfit, John C., M.D., St. Louis
Parsons, Ernest H., M.D., St. Louis
Vogt, William H., M.D., St. Louis
Rose, Frank H., M.D., Albany
Francis J. Canepa, M.D., St. Louis

Joseph C. Edwards, M.D., St. Louis: I have four resolutions to present, as follow:

Whereas, The public relations work of the MSMA is even more important now than it ever was, and

Whereas, It is necessary to keep the component societies of the MSMA informed of what is being done in public relations in order to have their continued cooperation, and

Whereas, We as individuals can try to answer criticisms of the medical profession, the cost of medical care and provisions for health insurance; with some suggestions by certain writers that there be more federal aid to health care plans and medical care, yet our individual efforts avail but little help from the press, therefore be it

*Resolved*, That the House of Delegates of the MSMA request a detailed report as to fees paid to public relations firms, a report of our past year's program in public relations at this session of MSMA and a monthly report of expenditures to be printed in Missouri Medicine, especially in regard to what the budget ($9,640.12) for public relations was spent for—and what attempts have been made to secure adequate presentation of the position of MSMA in the press of the state and nation—with approximate number of news releases sent out and as to the number that were actually accepted by the newspapers of the state and nation.

Whereas, It is important to know what is being done in the field of public instruction and public relations in order for the members of the MSMA to do their utmost to keep the public informed of the concern the MSMA has for the welfare of the people of this state, therefore be it

*Resolved*, That the report of the Committee on Health and Public Instruction be given before the House of Delegates of this Annual Session of MSMA, indicating what has been done with the budget ($1,174.23) with special mention of amounts spent for and the approximate number of news releases sent to newspapers of the state and the approximate per cent of these that are printed by the papers.

Whereas, The field of public service is such an important aspect of the work of the MSMA, and

Whereas, The annual budget allocated for the special Committee on Public Service is $11,199.65 which has been used to implement the program described in general terms on pages 1 to 15 and in the report of the Council, pages 1 and 2 of the section "Public Service" in the Delegates Handbook, therefore be it

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*Resolved*, That the House of Delegates of the MSMA hereby request a breakdown of the budget allocated to each broad category of activities described such as that for letters to members of the MSMA and its Auxiliary or news releases, newspaper advertising, etc., in order to properly inform the members of the House of Delegates and members of MSMA thus insuring their continued support of such a program and budget.

Whereas, The annual budget includes $7,187.00 for a pension plan for the office employees of the MSMA, and
Whereas, As yet there is no pension plan for members of the AMA, and
Whereas, Attempts to pass the original Jenkins Keogh bill in Congress whereby a per cent of the income of self-employed citizens may be set aside for retirement plans before taxes are calculated has repeatedly met with failure, therefore be it
*Resolved*, That the House of Delegates go on record as reaffirming our approval of such a bill before Congress and instruct our Secretary to send a letter so informing the various senators and congressmen from the State of Missouri and also a similar letter to the AMA, including in a letter to the AMA an added suggestion regarding the exploration of the possibility for establishment of a group retirement plan for members of the AMA.

The Speaker referred the resolutions presented by Dr. Edwards to the Reference Committee on Miscellaneous Affairs.

Charles B. Wheeler, M.D., Kansas City: I have a resolution sponsored by the Committee on Laboratory Medicine and approved by the Jackson County delegation.

Whereas, Osteopathic physicians provide the only medical service available in many communities and in the interest of complete care of the patient require consultation with competent physicians, and
Whereas, In some tax supported institutions the relationship between Osteopathic and M.D. physicians is such as to compel consultation, and
Whereas, Fund raising campaigns for improvement and building of hospitals are often jeopardized where Osteopaths represent a large segment of dispensers of medical services in the community, and
Whereas, Certain diagnostic services provided by government agencies now and in the future must be maintained solely for Osteopathic physicians because they are denied consultation services with M.D. physicians, and
Whereas, Certain highly specialized medical services are not now available to the patients of Osteopathic physicians causing the quality of medical care in large segments of Missouri to remain at less than a satisfactory level, and

Dr. Hollweg was nominated President-Elect.

Whereas, Prepaid third party indemnity and service plans already permit Osteopaths to participate, and
Whereas, Osteopathic physicians cannot in good conscience be denied diagnostic, medical and educational facilities supported by voluntary organizations and public funds, and
Whereas, The single licensure law in Missouri is in effect acceptance of the fact that Osteopathy is for practical purposes now regarded as having a scientific basis rather than being classified as a cult, now therefore be it
*Resolved*, That in order to elevate the quality of medical care in Missouri any and all consultation between Osteopathic and M.D. physicians be considered involuntary and therefore ethical according to the ruling of the Judicial Council of the A.M.A. adopted at the June, 1961 meeting.

The Speaker referred this resolution to the Reference Committee on Reports of Officers.

Roland P. Ladenson, M.D., Columbia: I wish to present the following resolution:

Whereas, The late Mrs. M. Pinson Neal was an active member of the Woman's Auxiliary of the Missouri State Medical Association for 40 years, and
Whereas, Throughout this period, she was a devoted wife and source of inspiration for our beloved member, M. Pinson Neal who has devoted 50 years in a life of service in the teaching and practice of medicine and whose contributions in many positions of leadership in this Association are well-known to us all, and
Whereas, The many friends of Dr. Neal, grieved by the recent death of his beloved wife, will surely wish to take some recognition of both of their lives of service, now be it hereby
*Resolved*, That the attention of the members of the Missouri State Medical Association be called to the fact that a perpetual Dr. and Mrs. M. Pinson Neal Student Loan Fund has been established at the University of Missouri Medical School, and that the House of Delegates cause a copy of this resolution be sent to Dr. Neal.

The Speaker referred this resolution to the Reference Committee on Reports of Officers.

Oscar P. Hampton, M.D., University City: I wish to present the following resolution:

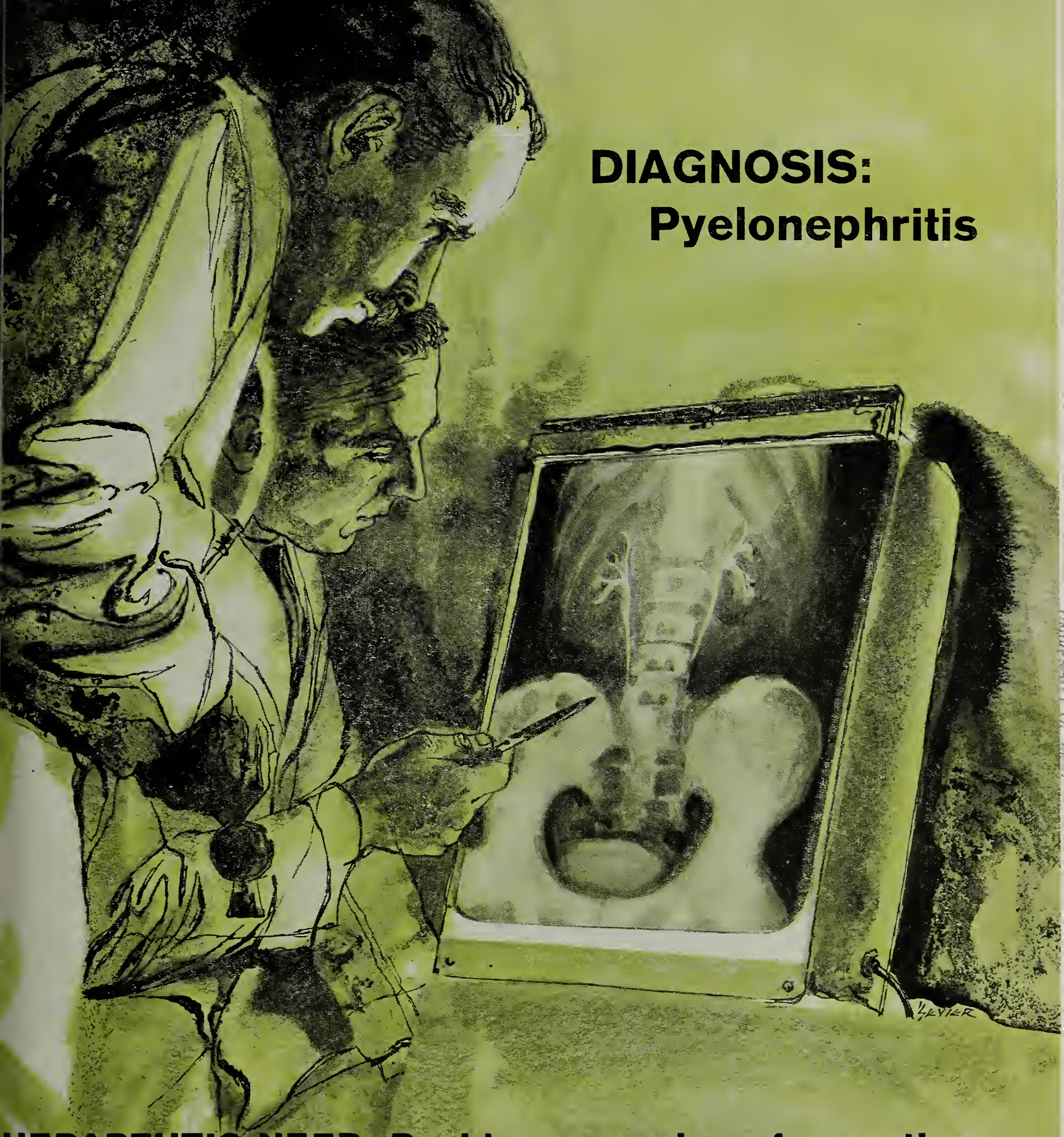
Whereas, The present boundaries of the 10 Councilor Districts of the MSMA have existed since the last modification in 1937, 25 years ago, and
Whereas, This antiquated distribution of representation on the Council shows gross inequities at this time and the periodic redistricting of the entire state appears most admirable for democratic representation in this organization, and
Whereas, The House of Delegates of MSMA in this 104th Session has in its wisdom rejected a proposed amendment to the Constitution of the MSMA which would have corrected some inequities but would create others, therefore be it
*Resolved*, That this House of Delegates instruct the President of the MSMA to appoint a committee of five experienced past officers of the MSMA or its House of Delegates to propose at the 1963 session appropriate rearrangement of the Councilor Districts, and be it further
*Resolved*, That in the future such a study and recommendation should be made relative to redistricting at intervals of ten years or less.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.

Edgar Davis, M.D., St. Louis: I wish to present the following resolution:

Whereas, Members of MSMA have been advised and are aware of the development of a new insurance Blue Shield plan by Missouri Medical Service for the St. Louis Area, and
Whereas, The Blue Shield is advertised as "The Doctors Plan" and at the present time in no way truly representative of the Missouri State Medical Association doctor members in the area of the State of Missouri involved, and
Whereas, It is recommended by the President of the National Blue Shield Board (Dr. Blake) that "self-perpetuating boards or committees" in Blue Shield organizations are "Not Good" for fair, efficient, ethical and satisfactory operation of any Blue Shield plan, and
Whereas, The Executive Board or committee as well as the members of the Corporate Board of Missouri Medical Service or Blue Shield are not elected or truly representative of the Missouri State Medical Association members involved and some are in a manner self-perpetuating, and
Whereas, In areas such as Michigan, Kansas City and elsewhere such elected representation has been granted by the Blue Shield organizations in those areas in an effort to best bring about the best plan for the participating policy holders or enrollees and the doctors affected, therefore be it
*Resolved*, That the Missouri State Medical Association notify the Blue Shield or Missouri Medical Service through the President of the MSMA that it is requested by the membership of MSMA that the Missouri Medical Service or Blue Shield working in liaison with a physician committee of sufficient size (not less than nine or more than 15) made up of elected representatives of the city and county medical societies involved, consider the reorganization of the Boards and Committees of Blue Shield by revision of the Constitution and By-laws if necessary before any definite plan similar to M-75 is offered for sale to any group or to the public, and be it further
*Resolved*, That this reorganization of the boards and committees be so established that all physician members are elected by members of the medical societies involved and on a rotating three year tenure of office, and be it further
*Resolved*, That the present ratio of physicians to lay members be maintained and established at two to one.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.



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R. D. Dwyer, M.D., North Kansas City: I have the following resolutions to present:

Whereas, The State of Missouri is divided into ten councilor districts each allowed one councilor who sits on what is perhaps the most important governing and policy making body of the MSMA, and

Whereas, The MSMA House of Delegates and Council is a representative body which should be made up of those most interested and best able to perform the duties required of these bodies, and

Whereas, There are many such able and willing men in our society who should have the opportunity to serve, and

Whereas, A person too long in office may tire of the chore and thus not perform to the best of his ability, now therefore be it

*Resolved,* That the rules and regulations be changed as to prohibit the same person serving as councilor from any one district for more than two successive terms, and be it further

*Resolved,* That this be made an official change in the Constitution and By-laws.

The Speaker referred this resolution to the Reference Committee on Miscellanous Affairs.

Whereas, Federal subsidy for medical and dental school construction and expansion or for any federal aid to education would lead to federal control of medical education and all education in general, and

Whereas, The control of medical and dental education and all education in general is a right reserved to the states by the Constitution, and

Whereas, The medical profession is striving diligently and making good progress on its own to take care of the medical education needs, now therefore be it

*Resolved,* That the MSMA House of Delegates go on record as disapproving federal subsidies to medical and dental schools and any and all federal aid to education.

The Speaker referred this resolution to the Reference Committee on Reports of Officers.

Whereas, The American Hospital Association is very closely aligned to the medical profession, and

Whereas, Legislation and social charge affecting one, affects the other, and

Whereas, The medical profession is opposed to further interference in the practice of medicine especially that financed through social security coverage or any other federal government agency, and

Whereas, The AHA in special session in Chicago in January noted in essence that they favored a National Blue Cross Plan with governmental financing regardless of the tax source of the implementing monies, now therefore be it

*Resolved,* That the Missouri State Medical Association go on record as strongly disapproving this action by the AHA, and be it further

*Resolved,* That special commendation be given to the delegates from Arkansas, California, Colorado, Idaho, Indiana, Kansas, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, North Carolina, Oregon, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, Wisconsin, Wyoming and one of the five Ohio Delegates, that copies of this resolution be sent to the central office of AHA, AMA, and the Missouri Delegates to the AHA.

The Speaker referred this resolution to the Reference Committee on Reports of Officers.

Announcement of reference committee meetings were made and the House of Delegates adjourned at 6:25 p.m.

### Wednesday, March 21, 1962

The House of Delegates was called to order by the Speaker, William C. Mixson, M.D., Kansas City, at 8:15 a.m. in the Chase Club, Hotel Chase, following breakfast.

Joseph C. Peden, M.D., St. Louis, reported for the Committee on Credentials, as follows: There are present seven officers, 10 Councilors and 127 Delegates.

The reading of the minutes was dispensed with.

Ben M. Bull, M.D., Ironton, presented the report of the Committee on Nominations.

## REPORT OF THE COMMITTEE ON NOMINATIONS

For Vice Presidents: C. G. Stauffacher, M.D., Sedalia; Forrest H. Long, M.D., Savannah; E. L. Spence, M.D., Kennett.

There being no nominations from the floor, on motion, duly seconded, these officers were declared elected.

For Delegates to the American Medical Association: Durward G. Hall, M.D., Springfield, alternate, Guy N. Magness, M.D., University City; H. E. Petersen, M.D., St. Joseph, alternate, J. Loren Washburn, M.D., Versailles.

There being no nominations from the floor, on motion, duly seconded, these officers were declared elected.

For Speaker of the House of Delegates, William C. Mixson, M.D., Kansas City; Vice Speaker, Stanley S. Peterson, M.D., Springfield.

There being no nominations from the floor, on motion, duly seconded, these officers were declared elected.

Charles B. Wheeler, M.D., Kansas City: I would like to place in nomination for the President-Elect a man from Jackson County engaged in the private practice of radiology in the Independence, Kansas City area. This man was raised in St. Louis, graduated from St. Louis University School of Medicine, took his radiology training in Kansas City and has served on the Council for the last four years. Last year he was the Chairman of the Council. He has a lovely wife and three fine children. He served with distinction in World War II. He is a member of the American College of Radiology, diplomate of the American Board of Radiology and a member of the Chamber of Commerce. It is a real pleasure to place in nomination the name of Dr. Kenneth C. Hollweg.

The nomination was seconded by David N. Kerr, M.D., St. Louis.

Oscar P. Hampton, M.D., University: I move the nominations be closed and the Secretary instructed to cast the unanimous standing vote of all the delegates for Dr. Kenneth C. Hollweg.

The Speaker: It is so ordered.

Kenneth C. Hollweg, M.D., Kansas City: Mr. Speaker and members of the Missouri State Medical Association, my heart is full at this time and I am sure you would agree that it would be impossible for me to give you my full feeling, and also you will agree this is no time for a speech after these several days. I want to pledge to you, however, that I will certainly follow the path as laid down by my illustrious predecessors, to follow the pursuit of truth and righteousness. With deep responsibility I accept this position. It is only with the understanding and thoughtfulness of my wife Dorothy that I am able to accept this great responsibility.

The following election of Councilors was reported: First District, Joseph L. Fisher, M.D., St. Joseph; Third District, Leonard T. Furlow, M.D., St. Louis; Fifth District, Byron M. Stuart, M.D., Boonville; Seventh District, Hector W. Benoit, Jr., M.D., Kansas City; Ninth District, E. A. Stricker, M.D., St. James.

Dr. Gerald L. Miller, Kansas City, presented the report of the Reference Committee on Miscellaneous Affairs.

## REPORT OF REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

The Reference Committee on Miscellaneous Affairs met at 9:00 a.m. and again at 4:00 p.m. on Tuesday, March 20, 1962, in the Lido Room and Suite 316, of the Chase Hotel, St. Louis, with all members present.

The Committee considered the Hampton Resolution

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of the St. Louis County Medical Society for redistricting MSMA.

After discussion, the Committee recommends adoption of this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

On second, the motion was carried.

The Committee considered the Clay County resolution on redistricting tenure of office of councilors and after completion of hearings and discussion within the Committee, the Committee proposes this resolution be rejected.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee has considered the three resolutions submitted by Dr. Edwards of St. Louis, concerning activities in public relations work of the MSMA, together with public instruction and public service.

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**Dr. Hollweg spoke briefly following his nomination.**

After due consideration and discussion of these resolutions, the Committee recommends disapproval of these three resolutions and proposes to submit a substitute resolution.

Whereas, In the past year, there has been a significant increase in expenditure of funds in the area of public relations work of the MSMA, and

Whereas, To date, there has been an inadequate accounting of these expenditures, and

Whereas, These activities have been in the past, disposed through the functions and observations of two standing committees, then be it hereby

*Resolved*, That a more detailed report of the activities of the public relations work of the MSMA in the past year be published and appended to the supplemental report of the Council in the July issue of Missouri Medicine, and be it further

*Resolved*, That in the future, committee or committees performing public relations work in the MSMA make an annual report outlining various functions and activities of the year and an accounting of these expenditures.

Mr. Speaker, I move the approval of this portion of the report.

On second, this portion of the report was adopted.

(The additional information on the activities of the Committees on Public Service, Public Relations and Public Policy and Health and Public Instruction, requested by this resolution of the 1962 House of Delegates, is set forth with their respective reports which will be found on pages 587, 594 and 633 of this issue of Missouri Medicine.)

The Committee considered the resolution on retirement program for physicians.

After due discussion, it was the feeling of the Committee that this is an untimely resolution and the Committee hereby recommends its disapproval.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee reviewed the resolution regarding doctors' representation on Missouri Medical Service Plan boards and committees.

Following due deliberation and discussion, the Committee recommends adoption of the resolution with the following revision.

The first resolve of this resolution is to read as follows:

That MSMA request Missouri Medical Service to consider the reorganization of its boards and its Executive Committee by a revision of its Constitution and By-Laws.

This reorganization plan is to be developed before July 1, 1962, by a committee of 12 members, selected as follows:

a) The President of Missouri Medical Service.

b) Four members of the Third Councilor District, either appointed by the Councilor of the District or elected by the physicians of the District.

c) Two members of the Fourth Councilor District either appointed by the Councilor of the District or elected by the physicians of the District.

d) One member from each of Councilor Districts 2, 5, 8, 9, 10, selected by the appropriate councilor from the presidents of the societies in his councilor District.

e) The Executive Secretary of Missouri Medical Service, ex-officio.

Mr. Speaker, I move the adoption of this portion of the report.

Following second, this was discussed by Drs. Edgar Davis and J. W. Thompson.

Upon vote, this portion of the report was adopted.

Dr. Miller: The Committee wishes to present a resolution concerning legislative measures submitted to the Congress of the United States by Senator Durward G. Hall and Representative Thomas Curtis of the United States Congress concerning income tax deduction on certain moneys expended toward health care of the over-65 age group.

Whereas, Representative Durward Hall has introduced into the Congress of the United States H.R. 7756, a bill to allow income tax deductions for those persons paying for medical care of persons over 65, involving:

a) Scaled exemptions.

b) Deductions.

c) Credits for those paying.

d) The carry-back and carry-forward principle for estimates of income at 65 and over.

e) Incentive for caring for catastrophic conditions without discrimination, and

Whereas, Representative Thomas Curtis has introduced into the Congress of the United States, a bill to allow tax deductions for employees and employers contributing to pension plans which include medical benefits, and

Whereas, By introducing these bills, these gentlemen are making a significant and unique contribution to voluntary methods for financing medical care of persons over 65, therefore be it

*Resolved*, That the Missouri State Medical Association commend these gentlemen for their contributions, endorse the principles on which these bills are based, and urge their enactment by the Congress of the United States, and that copies of this resolution be forwarded to the Chairman of the House Ways and Means Committee, the Chairman of the appropriate House and Senate Finance Committees and to the Congressmen for this state.

Mr. Speaker, I move approval of this portion of the report.

On second, this portion of the report was adopted.

Mr. Speaker, I move the approval of the Report of the Reference Committee on Miscellaneous Affairs *in toto*.

On second, the report of the Committee *in toto* was adopted.

Dr. C. W. Cooper, Thayer, presented the report of the Reference Committee on Reports of Officers.

## REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS

The Reference Committee on Reports of Officers met in the Colonial Room, Tuesday, March 20, 1962, at 1:00 p.m., with all members present.

The following resolution, presented by the Boone County Medical Society, was approved as presented:

WHEREAS, The late Mrs. M. Pinson Neal was an active member of the Woman's Auxiliary of the Missouri State Medical Association for 40 years, and

WHEREAS, Throughout this period, she was a devoted wife and source of inspiration for our beloved member, M. Pinson Neal, who has devoted 50 years in a life of service in the teaching and practice of medicine and whose contributions in many positions of leadership in this Association are well known to us all, and

WHEREAS, The many friends of Dr. Neal, grieved by the recent death of his beloved wife, will surely wish to take some recognition of both of their lives of service, now be it hereby

*Resolved,* That the attention of the members of the Missouri State Medical Association be called to the fact that a perpetual Dr. and Mrs. M. Pinson Neal Student Loan Fund has been established at the University of Missouri Medical School, and that the House of Delegates cause a copy of this resolution be sent to Dr. Neal.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee has reviewed the resolution on osteopathy sponsored by the Committee on Laboratory Medicine and accepts it with the following revision of the last paragraph so that it will read as follows:

"Now therefore be it Resolved that in order to elevate the quality of medical care in Missouri any and all consultation between osteopathic and M.D. physicians be considered ethical according to the ruling of the Judicial Council of the AMA adopted at the June 1961 meeting."

Mr. Speaker, I move the adoption of this portion of the report.

Following second, this was discussed by Drs. Thomas Macdonnell, M. F. Whitten, R. D. Dwyer, Roland P. Ladenson, Kenneth Glover, Charles B. Wheeler, Louis P. Hetlage, and Hector W. Benoit Jr.

Upon request, Dr. Cooper read the original last section of the resolution as follows: "Resolved, That in order to elevate the quality of medical care in Missouri any and all consultation between osteopathic and M.D. physicians be considered involuntary and therefore ethical according to the ruling of the Judicial Council of the AMA adopted at the June, 1961 meeting."

Dr. Kenneth Glover offered an amendment to have the wording "authorize all consultations carried on in the office."

The amendment was seconded but on vote was defeated.

Upon standing vote, the resolution as presented by the Reference Committee was adopted.

The Committee considered the resolution presented by Dr. Dwyer of Clay County regarding federal subsidies. The Committee feels that in view of the fact that federal grants for research, federal grants for hospital construction and federal grants for subsidization of training pro-

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| Dextro-Amphetamine Phosphate | 5.0 mg. | 10 mg.*,<br>15 mg.** | 2.5 mg. |
| Phenobarbital | 16 mg. | 32 mg. | .... |
| Mephobarbital | .... | .... | 8.0 mg. |
| Dextrose (9.4 cal.) | .... | .... | 2.5 mg. |
| Vitamin A | 5000 I.U. | 5000 I.U. | 1000 I.U. |
| Vitamin D | 1200 I.U. | 1200 I.U. | 100 I.U. |
| Vitamin B-1 | 3 mg. | 3 mg. | 0.5 mg. |
| Vitamin B-2 | 3 mg. | 3 mg. | 0.5 mg. |
| Vitamin B-6 | 1 mg. | 1 mg. | 0.15 mg. |
| Vitamin C | 100 mg. | 100 mg. | 15 mg. |
| Vitamin E | 1 I.U. | 1 I.U. | .... |
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grams is already in existence and that this resolution not only includes medical education but all types of education which is not justly within the province of the Missouri State Medical Association to render an opinion, that this resolution should not be adopted.

Mr. Speaker, I move the adoption of this portion of the report.

Following second, the motion that the resolution be not approved was discussed by Drs. R. D. Dwyer, James R. McVay Jr., Joseph C. Edwards, Joseph L. Fisher and Thomas Macdonnell.

Upon vote the recommendation of the Committee was defeated.

R. D. Dwyer, M.D., North Kansas City: I move the adoption of the resolution as previously submitted.

The resolution was presented again, as follows:

Whereas, Federal subsidy for medical and dental school construction and expansion or for any federal aid to education would lead to federal control of medical education and all education in general, and

Whereas, The control of medical and dental education and all education in general is a right reserved to the States by the Constitution, and

Whereas, The medical profession is striving diligently and making good progress on its own to take care of the medical education needs, now therefore be it

*Resolved*, That the MSMA House of Delegates go on record as disapproving federal subsidies to medical and dental schools and any and all federal aid to education.

Following a second, the resolution was discussed by Drs. Roland P. Ladenson, Charles B. Wheeler, Fred L. Wommack, Joseph C. Edwards, Hector W. Benoit Jr., and Gerald L. Miller.

Oscar P. Hampton, M.D., University City: I would like to propose an amendment to eliminate the clause in the last paragraph "any and all."

Following a second and discussion, on vote the amendment failed to pass.

On vote, the resolution was defeated.

The Committee reviewed the resolution regarding the American Hospital Association presented by Dr. Dwyer of Clay County. The Committee approves the resolution in principle, and recommends that the following substitute resolution be adopted:

Whereas, The American Hospital Association should be very closely aligned to the medical profession, and

Whereas, Legislation and social change affecting one. affects the other, and

Whereas, The medical profession is opposed to further interference in the practice of medicine especially that financed through Social Security coverage or any other federal government agency, and

Whereas, The AHA in special session in Chicago in January noted in essence that they favored a National Blue Cross Plan with governmental financing regardless of the tax source of the implementing monies, now therefore be it

*Resolved*, That the Missouri State Medical Association go on record as strongly disapproving this action by the AHA, and be it further

*Resolved*, That copies of this resolution be sent to the central office of AHA, AMA and the Missouri Delegates to the AHA.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

Mr. Speaker, I now move the adoption of this report *in toto*.

On second, the report *in toto* was adopted.

The Speaker asked Dr. Ralph Perry, Kansas City, to speak briefly on MMPAC.

Ralph Perry, M.D., Kansas City: Mr. Speaker and members of the House of Delegates: In line with the inspiring remarks of Dr. Annis made to us last evening, I think it would be well and appropriate to call to your attention some of the things that we are doing in Missouri to implement the things that Dr. Annis was talking about. I want to advise you that just yesterday we formed a committee which is known as the Missouri Medical Political Action Committee (MMPAC). This committee has the endorsement of the State Medical Association.

It is patterned along the lines of the American Medical Political Action Committee. Its main purpose is to encourage physicians and their wives and their friends to become informed on political issues and also encourages support of the candidacies of people who believe and think as we do, through our supporting the American principles right down the line. Now, I have talked to my delegation about this and I am proud to inform you we have 100 per cent subscription from the delegation from Jackson County in becoming members of this organization. We have also had many checks from other delegations.

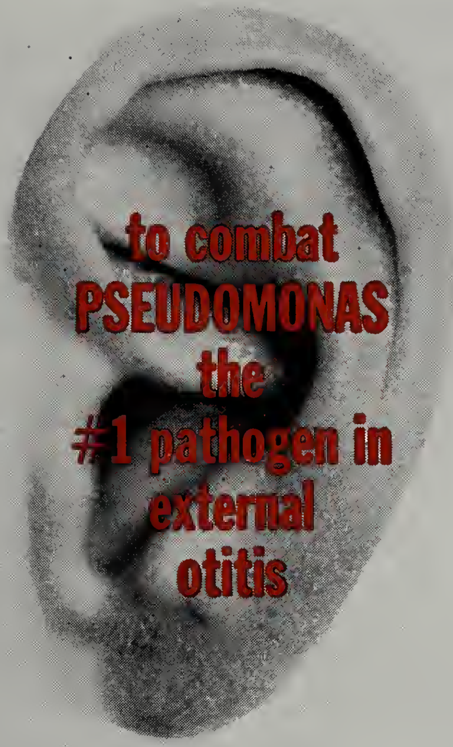
We have a table set up in the back of the room and I want to encourage all of you to stop, pick up a membership blank and become a member of this organization—we need your help and we need your support. Dr. Annis so aptly put it last night, if we doctors do not stick together in this fight, we are going to hang separately.

R. D. Dwyer, M.D., North Kansas City: I have two separate telegrams that deal with the same thing:

"The resolution opposing H.R. 4222 which you requested I propose to our state association has, in essence, been unanimously adopted by the MPA in convention assembled. The final form was not drafted by our council, which was adjourned for the duration of the convention. It came from the resolutions committee which strongly favored the original text. Our secretary, Cora Cox, prevailed upon the Committee to soften the text in order to avoid the possibility of offending Senator Humphrey, who is a leader in the effort to obtain a federal fair trade law, and his cooperation is valued by the NARD. I concurred in order to assure passage of at least the substance of the resolution. Cora said she had discussed H.R. 4222 briefly with Mr. O'Brien, but no action had been anticipated at this time. Specified requests from Mr. O'Brien did not reach Cora in time to be acted upon during the convention, so your action in initiating the series of events culminating in our resolution was vital. It was a privilege to cooperate with you in such an important matter of mutual concern. Sincerely, Dick Smith."

"The resolution opposing H.R. 4222 which you requested I propose to our state association has, in essence, been unanimously adopted by the MPA in convention assembled. It was a privilege to cooperate with you in such an important matter of mutual concern. Sincerely, Dick Smith."

The only reason I read this is that this is an example of what our Political Action Committee and also our society or committee that has to do with public relations is supposed to be doing. This is something that we can all do on our local level and that is to get your civic groups, your other groups interested in our problem to approve a resolution opposing H.R. 4222 and also the other socialistic medical legislation. This is an organization which is statewide, it is an allied organization with the druggists, who are our mutual friends,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and I think their action certainly will have good effect on our senators and representatives.

Dr. Richard W. Yore, St. Louis, presented the report of the Reference Committee on Resolutions.

## REPORT OF THE REFERENCE COMMITTEE ON RESOLUTIONS

The Committee on Resolutions, composed of delegates Richard W. Yore, Chairman, St. Louis City, Landis Y. Davis of Canton, Lewis-Clark-Scotland County Medical Society, C. G. Stauffacher, Pettis, John M. Martin, Buchanan, and A. E. McDermott, Perry County, met on Sunday, March 18, and considered the various resolutions submitted which had been referred to the Committee by the Speaker of the House. All members were present at the meeting.

Three resolutions were presented relating to the King-Anderson Bill, H.R. 4222. Two of these were submitted by the delegate from Clay County, R. D. Dwyer, and the other was submitted by the Council in the form of a supplementary report. The Committee recommends that the resolution proposed by the Council be adopted and the other two resolutions be not approved because they relate to the same subject.

The resolution is as follows:

WHEREAS, The Congress of the United States has under consideration H.R. 4222 and S. 909, known as the King-Anderson bills, along with similar proposals for compulsory health care program using the Social Security system for taxation and provision of benefits, and

WHEREAS, Institution of such programs for any particular group of the population such as the aged, will inevitably bring about extension to other groups, so that eventually all citizens will be under a Federally controlled plan of socialized medicine, and

WHEREAS, Such programs must unquestionably, result in tremendously increased costs for health care and a deterioration in the quality of that care, and

WHEREAS, Voluntary private methods for the financing of health care costs now in existence or under development are more than adequate to solve the problems of providing for the expense of health services for the nation's population, including the aged, and are vastly superior to the Social Security plans proposed, therefore be it

*Resolved,* That the physicians of Missouri, through the House of Delegates of the Missouri State Medical Association, hereby reaffirm their opposition to compulsory health care programs for the aged or any other groups of the population provided and administered under the Federal Social Security system, and be it further

*Resolved,* That copies of this resolution be forwarded to the President of the United States and to the members of the Congress from the State of Missouri.

Mr. Chairman, I move the adoption of this portion of the report.

The Speaker stated that affirmative action had been taken on this portion of the report at the previous session.

The Committee considered a resolution presented by the delegates from Jasper County relating to insurance forms and calling for legislation regarding such forms. The Committee wishes to point out that the commercial insurance organizations have already adopted uniform reporting forms through the medium of the Health Insurance Council, with the cooperation of the AMA, therefore the Committee recommends that this resolution should not be adopted.

Mr. Chairman, I move that this portion of the Committee's Report be adopted.

The Speaker stated that affirmative action had been taken on this portion of the report at the previous session.

The Committee considered a resolution from the Clay County delegate dealing with third party medicine and recommends that it not be adopted.

Mr. Speaker, I move the adoption of this portion of the report.

The Speaker stated that affirmative action had been taken on this portion of the report at the previous session.

The Committee considered a resolution submitted by the delegate from Boone County stating that there are no differences between a physician contracting with a Blue Shield Plan or a labor union or a governmental agency, etc. The House has already taken action on this question and the Committee is of the opinion that there are major differences as is evidenced by the fact that the Jackson County Blue Shield has been in existence since 1942 on a service basis, acceptable to a large percentage of doctors in Western Missouri. The Medicare Program has been in effect since 1957. Therefore the Committee recommends that this resolution be not adopted.

**President Dowell, Chairman of the Council Furlow and President-Elect Hollweg pose for camera.**

Mr. Chairman, I move that this portion of the report be adopted.

The Speaker stated that affirmative action had been taken on this portion of the report at the previous session.

Two resolutions submitted by the delegate from Clay County, R. D. Dwyer, concerning relative value schedules, etc., were considered. The Committee wishes to point out again that the new tri-level program is in effect in the Kansas City area which followed the relative value principle and that a large percentage of the doctors in the area of the Kansas City Blue Shield Plan participate in this program at the present time. In addition, Medicare was officially approved by this House of Delegates several years ago. The schedule of benefits was evolved through a relative value method of determining fees.

For these and other reasons, the Committee recommends that these resolutions be not adopted.

Mr. Chairman, I move that this portion of the committee's report be approved.

Upon request of Dr. R. D. Dwyer, North Kansas City, the resolution regarding "Relative Value Scale" was read.

Whereas, The Relative Value Scale is merely a thinly disguised means of establishing a fixed fee, and

Whereas, The Fixed Fee is the key to control of the medical profession by special-interest lay group, and

Whereas, The Fixed Fee is the essential ingredient in control by government agencies, and

Whereas, The Relative Value Scale is ethically and morally wrong because the individual physician is responsible to, and should bargain with, only his patients, and

Whereas, The Relative Value Scale does not allow for or evaluate experience or training, now therefore be it

*Resolved,* That the MSMA House of Delegates condemns the use of the Relative Value Scale once and for all as a false and dangerous means of establishing a medical fee in the free enterprise practice of medicine.

The motion by Dr. Yore, that this resolution be not accepted, having been seconded, was voted upon and the recommendation of the Committee was adopted.

The following resolution, being called for by Dr. Dwyer, was read as follows:

Whereas, One of the main pillars of the free enterprise system of medicine which has given to our country the best medical care and service ever known to mankind, is the direct and individual relationship between doctor and patient, and

Whereas, Through this relationship our responsibility is to frankly and freely discuss our fees and special charges with the patient before they are made, and

Whereas, No third party to this relationship, especially nonmedically oriented labor barons or compromising insurance companies have any ethical or moral right to interfere and who do so only to take away part or all of the bargaining freedom of one or both original parties, now therefore be it

*Resolved,* That the MSMA House of Delegates go on record as being unalterably opposed to any and all types of third party medicine.

The motion of Dr. Yore that the recommendation of the Reference Committee be that this resolution not pass was seconded, and on vote the report of the Committee was adopted.

Dr. Dwyer stated that one resolution dealing with the King-Anderson bill had not been reported upon. The resolution was read as follows:

Whereas, Legislation of the King Anderson type as embodied in H.R. 4222 unrealistically attempts to solve a socio-economic-health problem in a socialistic manner which does not meet the needs of the situation; would be inordinately expensive; would interfere with the doctor-patient relationship; would lead inevitably to further encroachments by government into medical care; would result eventually in a deterioration of the type of medical care rendered the public and is therefore detrimental to the best public interest, and

Whereas, The MSMA House of Delegates emphasizes that the medical profession and only the medical profession can render medical care under any system and that the medical profession is best qualified to determine what is the best medical care and how it can best be delivered; and

Whereas, The MSMA House of Delegates reiterates that the medical profession has always, does now and will continue to see that every person receives the best available medical care regardless of ability to pay, this being rendered according to the system it believes is in the public interest, now therefore be it

*Resolved,* That the MSMA House of Delegates speaking for all the Doctors of Missouri desire that it be generally known and understood it will not be a willing party to implementing any system which it believes to be detrimental to the public welfare.

That copies of this resolution be forwarded to the President of the United States, to the Senators and Representatives of this Sovereign State of Missouri in the United States Congress, to the Honorable Abraham Ribicoff—Head of Dept. of Health, Education and Welfare and his zealous assistant, Mr. Wilbur Cohen, to the Chairman of the House Ways and Means Committee and to our parent organization, the AMA.

Dr. Yore: The Committee considered this with the other resolution dealing with opposition to H.R. 4222 and recommends that the resolution contained in the report of the Council on H.R. 4222 be substituted for these resolutions.

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Secretary Matthews installed new officers.

Upon second, the recommendation of the Committee was approved.

Dr. Yore: Another resolution submitted by the Delegate from Clay County, Dr. R. D. Dwyer, concerning H.R. 4222 was considered. The Committee recommends that this resolution be not adopted and I so move.

Upon second, the recommendation of the Committee was adopted.

Mr. Speaker, I move that the report as a whole be approved.

Upon second, the report was adopted.

Speaker: Under unfinished business, we have two amendments to the By-laws which have lain on the table for the required day. It requires a two thirds majority of the House of Delegates to amend the By-Laws.

First: Amend Chapter VII, page 6, Section 2, of the By-Laws by striking out "A Committee on Public Policy and Public Relations" and "A Committee on Health and Public Instruction (McAlester Foundation)" and substituting in lieu thereof "A Committee on Public Service," and further amend Chapter VII, page 7, Section 2, by striking out the paragraphs beginning "The Committee on Public Policy and Public Relations shall consist . . ." and "The Committee on Health and Public Instruction (McAlester Foundation) shall keep in touch with . . ." and substituing in lieu thereof "The Committee on Public Service shall concern itself with promoting good relations between the profession and the public, and act to represent the Association in matters of public affairs. It shall cooperate with similar committees of the county medical societies in order to disseminate information to the public regarding the science and art of medicine and the protection of public health." Further amend Chapter XI, page 9, Section 10, by striking out the entire section, and amend Chapter XI, page 9, Section 11, by striking out Section 11 and inserting Section 10 in lieu thereof.

On vote the amendment was adopted by a majority in excess of two thirds of the Delegates present and voting.

Speaker: The second amendment to the By-Laws, following amendment of the Reference Committee report on Monday, now reads: "Amend Chapter VIII, page 8, of the By-Laws, Section 1, line 2, by striking out the figure '$35.00' and inserting in lieu thereof the figure '$42.50' Further amend Chapter VIII, page 8, of the By-Laws, Section 1, by adding to the section "There shall be an assessment of $7.50 for active members and $3.75 for Junior members to be payable to the Treasurer of the Missouri State Medical Foundation for a period of three years beginning January 1, 1963."

This was discussed by Drs. Paul F. Max, Charles R. Doyle, George Wulff, and J. W. Thompson.

On vote the amendment was adopted by a majority in excess of two thirds of the Delegates present and voting.

David N. Kerr, M.D., St. Louis: I would like to move that this House of Delegates go on record as suggesting to Blue Shield the plans already suggested and impress upon Blue Shield that the fair and equitable fee plan and the deductible major medical plans were both passed unanimously, and the one concerning fixed fees had some degree of opposition and that they should consider those in that light when they present any insurance programs to the doctors of Missouri.

Unanimous consent of the House was not granted to consider the motion.

John I. Matthews, M.D., Jefferson City, Secretary, installed the President, President-Elect, the Vice Presidents, the A.M.A. Delegates and Alternates, the Councilors, the Speaker and Vice Speaker of the House of Delegates.

Donald M. Dowell, M.D., Chillicothe read the appointments to committees to fill expired terms and chairmenships, which were approved by the House.

## COMMITTEE APPOINTMENTS 1962

Committee on Scientific and Postgraduate Work—John I. Matthews, Jefferson City, Chairman; M. Pinson Neal, Columbia. Associate Members: Melvin C. Kasten, Cape Girardeau; Carl H. Almond, Columbia; Robert W. Smith, Marceline; Richard W. Yore, St. Louis; J. F. McDonnell, Kansas City.

Committee on Defense—C. E. Hyndman, St. Louis, Chairman; Roland S. Kieffer, St. Louis; W. W. Gist, Kansas City.

Committee on Medical Education and Hospitals—William A. Knight, Jr., St. Louis, Chairman; Kenneth Glover, Mount Vernon. Associate Member: Henry C. Bauman, Maryville.

Committee on Cancer—Charles E. Lockhart, Springfield, Chairman; George A. Carroll, St. Louis; James R. McVay, Jr., Kansas City. Associate Members: E. J. Schewe, Columbia; H. C. Stricker, Jefferson City; Henry C. Allen, St. Louis; G. Neil Berry, Kansas City; John H. Platz, Carrollton.

Committee on Medical Economics—G. W. Winn, Boonville, Chairman; Richard L. Sterkel, St. Louis. Associate Members: Kenneth Knabb, Springfield; E. T. Hansbrough, Poplar Bluff; Rae W. Froelich, Lebanon; Chester Clark, Trenton.

Committee on Mental Health—George W. Forman, St. Joseph, Chairman; James N. Haddock, Webster Groves; Henry V. Guhleman, Jefferson City; William I. Stryker, St. Louis; D. R. Edwards, Sedalia; A. L. Brown, Springfield; George H. Lawrence, St. Louis; E. H. Trowbridge Jr., Kansas City; N. Venay Bolin, Kansas City; James M. A. Weiss, Columbia.

Committee on Maternal Welfare—A. C. Trueblood, Clayton, Chairman; H. C. Willumsen, St. Joseph; William B. See, Columbia. Associate Members: C. G. Stauffacher, Sedalia; E. E. Wadlow, St. Joseph; Paul E. Kratz, Cape Girardeau; J. J. Wimp, Kirksville; Mac-

Donald Bonebrake, Springfield; Eugene G. Hamilton, St. Louis; Robert Brown, Kansas City; Seymour Monat, St. Louis; V. D. Vandiver, Chillicothe.

Committee on Infant and Child Care—James A. Kinder, Cape Girardeau, Chairman; E. J. Schwartz, Springfield; Daniel B. Landau, Hannibal; H. E. Petersen, St. Joseph; R. J. LaDriere, St. Louis; Guy N. Magness, University City; Clement E. Brooke, Columbia; James J. Pascoe, Nevada; Jack N. Wiles, West Plains; S. F. Cockerell, Independence.

Committee on Constitution and By-Laws—W. A. Bloom, Fayette, Chairman; H. M. Parker, Kansas City; James Meador, Clayton (to replace Charles Martin, St. Louis, deceased).

Committee on Trauma—Robert E. Funsch, St. Louis, Chairman; Paul W. Meyer, Kansas City; Richard Lord, St. Louis. Associate Members: Howard McAlhaney, Springfield; Otis E. James, Kansas City; John McDaniel, St. Joseph.

Committee on Eye Health—John McLeod, Kansas City, Chairman; H. B. Stauffer, Jefferson City. Associate Members: Dick H. Underwood, Kansas City; S. Albert Hanser, St. Louis; Paul M. Beck, St. Joseph; D. E. Eggleston, Macon; W. L. Post, Joplin; John Buesseler, Columbia; George Mandler, Chillicothe.

Committee on Laboratory Medicine—Eugene Tucker, St. Louis, Chairman; Henry Sweets, Hannibal; Charles Wheeler, Kansas City.

Committee on Industrial Health—Douglas A. Ries, St. Louis, Chairman; James W. Clawson, Springfield; S. W. Scorse, Joplin. Associate Members: C. Rush McAdam, St. Louis; Richard A. Sutter, University City; C. H. Appleberry, Rivermines.

Committee on Diabetes—H. E. Oppenheimer, Clayton, Chairman; Lucien W. Ide, St. Joseph. Associate Members: William H. Olmsted, St. Louis; Harold Roberts, St. Louis; Ralph S. Casford, Kansas City; Thomas W. Burns, Columbia; Jack Vinyard, Carrollton; Robert E. Koch, Clayton.

Committee on Anesthesiology—Walter W. Tillman, Springfield, Chairman; Edward O. Kraft, St. Louis. Associate Member: Kenneth C. Keown, Columbia.

Committee on Hospital and Professional Relations—Ralph Perry, Kansas City, Chairman; J. H. Summers, Lebanon. Associate Member: Willard Bartlett, St. Loius.

Committee on Control of Venereal Disease—Edwin M. Powell, Springfield, Chairman; T. E. McMillan, Kansas City. Associate Members: Ralph Bohnsack, Brookfield; G. R. Wempe, Maryville.

Committee on Physical Medicine and Rehabilitation—D. Elliott O'Reilly, St. Louis, Chairman; F. D. Sundstrom, Springfield; James M. Baker, Columbia. Associate Members: Otokar Machek, St. Louis; Edward B. Shires, Kansas City; John W. Deyton, St. Louis; James Willoughby, Liberty.

Committee on Civil Defense Disaster Medical Care—Carl D. Siegel, Sedalia, Chairman; M. P. Leech, Fayette; H. D. Steinbeck, Union; Carroll P. Hungate, Kansas City; John L. Mothershead, St. Joseph; John H. Walterscheid, Hannibal; Curtis H. Lohr, Clayton; R. Ned White, Springfield; George E. Thoma, St. Louis; George L. Watkins, Farmington; O. P. Hampton, University City; J. S. Sanders, Jefferson City.

Committee on Aging—Stanley S. Peterson, Springfield, Chairman; Rolla B. Wray, Nevada. Associate Members: Robert Kingsland, Clayton; Robert H. Tanner, Jefferson City; Don H. Giesler, Osceola; John. A. Griffith, Kansas City; Elvin D. Imes, Maryville.

Committee on Radiology and Ionizing Radiation—Wendell G. Scott, St. Louis, Chairman, one year term; Milton Shoss, Cape Girardeau, two year term; Louis A. Scarpellino, Kansas City, two year term; Marvin L. Napper, Springfield, three year term; Mark D. Eagleton, Clayton, three year term. Associate Members: J. Stewart Whitmore, Kansas City; Gwilym S. Lodwick, Columbia.

Committee on Tuberculosis—Florence E. MacInnis, Kansas City, Chairman; Paul Murphy, St. Louis; H. M. Roberts, Kansas City; Joseph L. Lucido, St. Louis; Walter C. Gray, St. Louis; David N. Kerr, St. Louis; John W. Polk, Springfield; Carl G. Popp, Sikeston; Judson I. Chalkley, Columbia; Joseph Conrad, Chillicothe.

Committee on Study of Cardiac Disease—James G. Janney, St. Louis, Chairman; Earl L. Loyd, Jefferson City; William I. Park, Springfield; William J. Shaw, Sr., Fayette; Jack M. Martt, Columbia; William L. Mundy, Kansas City; William J. Gillespie, St. Louis; Caryl A. Potter, St. Joseph; F. J. Biggs, Poplar Bluff; Joseph C. Edwards, St. Louis; Joseph F. Gale, Chillicothe.

Committee on Rural Medical Services—B. J. Bass, Salem, Chairman; Robert E. Tribble, Chaffee; James H. Sweiger, Maysville; K. S. Latham, California; Harold F. Hoelscher, Warrenton; James E. Campbell, Macon; Charles A. Worley, Sweet Springs; Fred L. Wommack, Crane.

Committee on American Medical Education Foundation—James P. Murphy, St. Louis, Chairman; Stuart Exon, Jefferson City; William T. McNew, Carthage; Russell D. Shelden, Kansas City; Allen I. Herman, St. Joseph; E. W. Allen, Carrollton.

SPEAKER: I would like to urge Delegates to get resolutions to the Association office by February 1 of the year of the meeting so that they can be included in the Handbook. This would facilitate the business of the session a great deal.

JOHN F. BOWSER, M.D., Kansas City: In expressing what I believe to be the feeling of the entire attending membership of the Missouri State Medical Association, I wish to thank the St. Louis Medical Society and the St. Louis County Medical Society for their outstanding hospitality and for their choice of the excellent facilities of the Chase-Park Plaza Hotel to hold the 104th Annual Meeting of the Missouri State Medical Association.

I further wish to thank the many individual members and officers of the Association for their efforts in making this a successful and outstanding meeting.

Mr. Speaker, the Jackson County Medical Society delegation wishes to extend to the Missouri State Medical Association an invitation to hold the 105th Annual Meeting at Kansas City, Missouri, in 1963.

SPEAKER: Thank you, Dr. Bowser. On behalf of the Missouri State Medical Association I will accept the invitation.

Upon motion, duly seconded, the House of Delegates adjourned at 10:30 a.m.

## THE COUNCIL

### Hotel Chase, St. Louis

### March 18, 1962

The Council met at 8:30 a.m., March 18, at Hotel Chase, with Kenneth C. Hollweg, M.D., Kansas City, Chairman, presiding. Those present were Drs. Hollweg; Joseph L. Fisher, St. Joseph; A. P. Rowlette, Moberly; Leonard T. Furlow, St. Louis; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; J. H. Summers, Lebanon; Donald M. Dowell, Chillicothe; William C. Mixson, Kansas City; Charles R. Doyle, St. Louis; Richard H. Kiene, Kansas City; Joseph V. Finnegan, St. Louis; Vernon E. Wilson, Columbia; Durward G. Hall, Springfield; H. M. Hardwicke, Jefferson City; Carl D. Siegel, Sedalia; H. E. Petersen, St. Joseph; Gerald L. Miller, Kansas City; Ralph Perry, Kansas City; Edwin M. Powell, Springfield; Messrs. W. H. Bartleson, Kansas City; Hollister Smith, Lemoine Skinner, Jordan Singleton, Gene Lunn, Tom Fox, Tom O'Brien, and Helen Penn, St. Louis.

### CORPORATE PRACTICE

The report of the Committee on Corporate Practice was accepted, with the following addition:

"It was agreed that the Committee should be asked to restudy the problem of Kintner type associations in view of the opinion of the Attorney General on March 15, the conclusion of which follows: Under Missouri law, corporations cannot practice medicine. However, contracting to supply medical services and contracting with licensed medical practitioners to furnish such services does not constitute the practice of medicine under present Missouri court decisions. Therefore, making such contracts constitutes a proper corporate purpose."

The resolution proposed by David N. Kerr, M.D., St. Louis and adopted by the 1961 House of Delegates, which was referred to the Committee on Corporate Practice for study, on motion of Dr. Furlow, duly seconded, was approved for inclusion in the supplemental report of the Council.

### RESOLUTION RE: H.R. 4222

A resolution re H.R. 4222, on motion of Dr. Furlow, duly seconded, was approved for presentation to the House of Delegates.

### MEDICAL RECRUITING

The recommendations on medical recruiting proposed at a joint meeting of the Committees on Medical Education and Hospitals and Rural Health Service, were approved on motion of Dr. Fisher, duly seconded.

### CRIPPLED CHILDREN'S SERVICE

It was pointed out that the Board of Curators of the University of Missouri which administers the Crippled Children's Service and added plastic surgery and heart surgery to the original orthopedic service and that they wished to add pediatricians to the service.

On motion of Dr. Furlow, duly seconded, it was voted that the use of pediatricians should not be withheld.

### CIVIL DEFENSE

Dr. Siegel asked that the following recommendation be added to the report of the Committee on Civil Defense Disaster Medical Care: "The Committee recommends that MSMA go on record as approving the Medical Self-Help Program as designed and presented by the U. S. Public Health Service in cooperation with the American Medical Association."

On motion of Dr. Doyle, duly seconded, this recommendation was accepted for presentation to the House of Delegates.

### FOUNDATION

A meeting of the Missouri State Medical Foundation immediately following the House of Delegates' Monday session was announced; also that the Council would serve as a nominating committee for the Board of Trustees of the Foundation.

### CONTROL OF VENEREAL DISEASE

The report of the Committee on Control of Venereal Disease, on motion of Dr. Fisher, duly seconded, was accepted, for submission to the House of Delegates.

Kenneth C. Hollweg, M.D., *Chairman*

## Meeting of March 21, 1962

The Council met at 12:00 noon, March 21, at Hotel Chase, St. Louis, with Donald M. Dowell, M.D., Chillicothe, President, presiding. Those present were Drs. Dowell; Joseph L. Fisher, St. Joseph; A. P. Rowlette, Moberly; Leonard T. Furlow, St. Louis; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; E. A. Stricker, St. James; Doyle C. McCraw, Bolivar; W. D. English, Cardwell; Kenneth C. Hollweg, Kansas City; Hector W. Benoit, Jr., Kansas City; Ralph Perry, Kansas City; Messrs. Jordan Singleton, Gene Lunn, Tom P. Fox, Ray McIntyre, T. R. O'Brien, and Helen Penn, St. Louis.

Dr. Dowell introduced Dr. Benoit, the new Councilor from the Seventh District.

### ELECTION OF OFFICERS

Dr. Stuart nominated Dr. Furlow for Chairman of the Council. Motion by Dr. Whitener the nominations be closed and that Dr. Furlow be unanimously elected, being duly seconded, was passed.

Dr. Furlow presided at the remainder of the meeting.

Dr. Stuart, on motion of Dr. Stricker, duly seconded, was elected Vice Chairman of the Council.

On motion of Dr. Stuart, duly seconded, Dr. John I. Matthews, Jefferson City, was elected Secretary.

On motion of Dr. Whitener, duly seconded, Dr. Charles R. Doyle, St. Louis, was elected Treasurer.

### NEXT MEETING

It was decided that the next meeting of the Council would be held May 26 and 27 in St. Louis.

### INTERPROFESSIONAL CODE

Mr. O'Brien said that the law profession has recently published a brochure and were interested in the combined brochure by the law and medical professions. The cost was estimated at $350.00. On motion of Dr. Hollweg, duly seconded, this was approved.

### HEALTH RESOURCES SURVEY

The Health Resources survey by the Woman's Auxiliary was discussed. It was announced that survey had been completed in 36 counties, and that the Auxiliary had suggested that an outside agency complete the work. No action was taken. It was suggested that the Woman's Auxiliary and the individual county auxiliaries that had completed the survey be complimented and thanked for their work.

### CORNORATE PRACTICE

On motion of Dr. Furlow, duly seconded, it was voted to ask the Committee on Corporate Practice to

each patient may require

**or dramatic promptness:** ROBAXIN INJECTABLE usually provides elaxation of painful spasm *in minutes.* Clinicians have reported that is "effective in producing immediate relaxation,"[7] and brings about dramatic relief of pain and spasm" within 15 to 20 minutes.[3]

In each 10-cc ampul Methocarbamol (Robins) 1.0 Gm.

**or prolonged use with safety:** ROBAXIN TABLETS safely maintain elief of spasm *without drowsiness.* "The effect does not wax and wane,"[4] nd continued administration shows "no deleterious effect on normal uscle tone."[6]

In each white, scored tablet Methocarbamol (Robins) 0.5 Gm.

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**or concurrent analgesia:** ROBAXISAL TABLETS, combining ROBAX- with aspirin, are useful in spasm-triggering states that are painful in hemselves, or when pain is prominently associated with muscle spasm.

In each pink-and-white laminated tablet Methocarbamol (Robins) 400 mg.
Acetylsalicylic acid (5 gr.) 325 mg.

**or concurrent analgesia plus sedation:** ROBAXISAL-PH TAB-ETS, combining ROBAXIN with the sedative-reinforced analgesic PHENA-HEN®, are particularly helpful in giving comprehensive relief to patients n whom muscle spasm is accompanied by spasm-potentiating pain and pprehension.

In each green-and-white laminated tablet
Methocarbamol (Robins) 400 mg.
Phenacetin 97 mg.
Acetylsalicylic acid (1¼ gr.) 81 mg.
Hyoscyamine sulfate 0.016 mg.
Phenobarbital (⅛ gr.) 8.1 mg.

ROBAXISAL®

**eferences:** 1. Carpenter, E. B.: South. M. J. 51:627, 1958. 2. Hudgins, A. P.: Clin. Med. :243, 1961. 3. Lamphier, T. A.: J. Abdomin. Surg. 3:55, 1961. 4. Levine, I. M.: Med. Clin. . America 45:1017, 1961. 5. Meyers, G. B., and Urbach, J. R.: Penna. M. J. 64:876, 1961. Perchuk, E., Weinreb, M., and Aksu, A.: Angiology 12:102, 1961. 7. Poppen, J. L., and lanagan, M. E.: J.A.M.A. 171:298, 1959. 8. Schaubel, H. J.: Orthopedics 1:274, 1959. Steigmann, F.: Am. J. Nursing 61:49, 1961.

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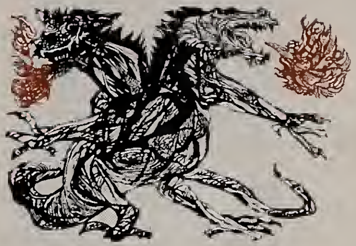

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"HIGH THERAPEUTIC EFFECT"

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"... high therapeutic effect ..."[5]

"... superior to other relaxants ..."[9]

"... remarkably effective ..."[2]

"... a high potential for prompt relief ..."[8]

"... unusual freedom from toxicity ..."[1]

restudy its work in view of the opinion handed down by the Attorney General on March 15.

LEONARD T. FURLOW, M.D., *Chairman*

## REGISTRATION AT THE ONE HUNDRED FOURTH ANNUAL SESSION

### First Councilor District—36

Allen, E. Warren, Carrollton
Ames, William H., St. Joseph
Benson, Scott C., St. Joseph
Bohnsack, R. W., Brookfield
Carlin, Albert L., Stanberry
Clark, C. L., Trenton
Conrad, Joseph A., Chillicothe
Daley, Frank R., Hamilton
Dixon, John R., Brookfield
Dowell, Donald M., Chillicothe
Dunshee, R. E., Maryville
Dwyer, R. D., North Kansas City
Edwards, E. F., North Kansas City
Fair, William L., Chillicothe
Fisher, Joseph L., St. Joseph
Forgrave, John R., St. Joseph
Gearhart, Merriam, Bethany
Goldberg, I. E., Braymer
Hodge, Robert H., North Kansas City
Ide, Lucien W., St. Joseph
Long, Forrest C., Savannah
Mabrey, J. P., Plattsburg
Mandler, George, Chillicothe
Martin, J. N., St. Joseph
McDaniel, John R., St. Joseph
Nelson, Fred L., St. Joseph
Petersen, H. E., St. Joseph
Platz, John H., Carrollton
Riddell, R. V., St. Joseph
Rost, William B., St. Joseph
Sklenar, D. E., St. Joseph
Smith, Robert W., Marceline
Spelman, A. E., Smithville
Sweiger, J. H., Maysville
Wadlow, E. E., St. Joseph
Willman, Charles R., St. Joseph

### Second Councilor District—20

Bach, Lysle M., Hannibal
Barnett, F. A., Paris
Campbell, James E., Macon
Collins, Gretchen D., Macon
Davis, Landis Y., Canton
Dreyer, Philip V., Huntsville
Fleming, Thomas S., Moberly
Freeman, Spencer L., Kirksville
Glascock, Donald, Palmyra
Greene, H. L., Hannibal
Hamlin, Wyeth, Hannibal
Harms, F. L., Salisbury
Landau, Daniel B., Hannibal
Lanning, Robert J., Hannibal
Lewellen, Charles H., Louisiana
Middleton, John, Louisiana
Roller, M. J., Hannibal
Rowlette, A. P., Moberly
Szymanski, S. R., Moberly
Tarvydas, Francis, Edina

### Third Councilor District—247

Adams, James T., Fort Leonard Wood
Ahern, Arch M., St. Louis
Aldrich, James T., St. Louis
Allen, Henry C., Clayton
Allen, William E., St. Louis
Altheide, J. P., St. Louis
Arneson, A. N., St. Louis
Austin, M. G., St. Louis
Banton, William C., St. Louis
Barden, Frank W., St. Louis
Bartlett, Robert W., St. Louis
Bartnick, Mitchel L., St. Louis
Behrens, Gerald L., St. Louis
Benjamin, Durand, St. Louis
Berman, Joseph P., St. Louis
Berry, John W., Clayton
Boedeker, Roy V., St. Louis
Boemer, L. C., St. Louis
Bohne, William R., St. Louis
Bondurant, Bryce H., St. Louis
Boswell, John R., St. Louis
Bowersox, W. A., St. Louis
Bradley, Richard V., Clayton
Bricker, Eugene M., St. Louis
Broun, G. O., St. Louis
Brown, James Barrett, St. Louis
Bruce, Helen, L., St. Louis
Burford, C. E., St. Louis
Burford, E. H., St. Louis
Burmeister, R. William, St. Louis
Busch, Anthony K., St. Louis
Calkins, Delevan, St. Louis
Campos, F. J., St. Louis
Cannon, Edward M., St. Louis
Cannon, William J., St. Louis
Carroll, Grayson, St. Louis
Cassel, Melvin A., St. Louis
Catanzaro, A. F., St. Louis
Clark, Clarence L., Creve Coeur
Clark, J. Fred, St. Louis
Cooper, T. J., St. Louis
Costello, Joseph P., St. Louis
Criscione, James R., St. Louis
Cutler, Harry, St. Louis
Danis, Peter G., St. Louis
Davis, Martin W., St. Louis
Devine, John B., St. Louis
Dorsett, E. Lee, Clayton
Doyle, Charles R., St. Louis
Drake, T. G., St. Louis
Dreyer, Carl J., Webster Groves
Eades, D. W., St. Louis
Eagleton, Mark D., Clayton
Eberle, John P., St. Louis
Edwards, Joseph C., St. Louis
Ernst, Edwin C., St. Louis
Ernst, Roland P., St. Louis
Finnegan, Joseph V., St. Louis
FitsGerald, Leo P., University City
Forsen, James A., St. Louis
Fox, Leon J., St. Louis
Fox, Robert E., St. Louis
Frederick, R. O., St. Louis
Freund, Samuel J., St. Louis
Friedman, Bernard, Koch
Furla, Gus J., St. Louis
Furlow, Leonard T., St. Louis
Gafney, George T., St. Louis
Gansloser, W. M., Clayton
Gantner, George, St. Louis
Glassberg, B. Y., St. Louis
Goldenson, M. J., St. Louis
Griggs, James Y., Clayton
Grindon, J. B., St. Louis
Grogan, Frank M., St. Louis
Guccione, Joseph B., St. Louis
Gunn, W. T., St. Louis
Haddock, James N., Webster Groves
Hagebusch, O. E., St. Louis
Hamilton, E. G., Clayton
Hampton, Stanley F., St. Louis
Hanlon, C. Rollins, St. Louis
Harper, F. B., St. Louis
Hartnett, Leo J., Clayton
Hawkins, George L. Jr., St. Louis
Headrich, John A., St. Louis
Heinbecker, Peter, St. Louis
Hennelly, John J., St. Louis
Henschel, Eugene V., St. Louis
Hilbert, Paul H., St. Louis
Hines, Arthur A., St. Louis
Hines, Kenneth K., St. Louis
Hobart, Carl, St. Louis
Hofstatter, Leopold, St. Louis
Hofstatter, Lilli, St. Louis
Hollo, Vencel W., St. Louis
Holtz, Alan S., Kirkwood
Horner, John L., St. Louis
Hosto, Leland E., Clayton
Hrdlicka, Victor E., St. Louis
Hulbert, Bernard, St. Louis
Hutchinson, James H., St. Louis
James, Norman A., St. Louis
Johnstone, John Jr., Kirkwood
Jones, O. S., St. Louis
Kappesser, Netajean, St. Louis
Kappesser, Roland C., St. Louis
Karandjeff, A. D., St. Louis
Keller, Louis, Clayton
Kerr, David N., Clayton
King, John V., Webster Groves
Kinsella, Edward D., St. Louis
Klenk, Charles L., St. Louis
Klym, N. T., St. Louis
Kneal, Ellsworth, St. Louis
Koenig, George H., St. Petersburg, Fla.
Kohler, Louis H., St. Louis
Kopp, L. J., St. Louis
Kountz, William B., St. Louis
Kramolowsky, H. H., St. Louis
Kuebrich, T. C., Ferguson
Ladd, Charles B., St. Louis
Lane, Clinton W., St. Louis
Lanier, Earl W., St. Louis
Lansche, E. A., St. Louis
Larsen, Kenneth V., St. Louis
Lederman, J., St. Louis
Lembeck, J. A., St. Louis
Lerwick, E. R., St. Louis
Lewis, J. Eugene, St. Louis
Lieb, Francis X., St. Louis
Link, A. J., St. Louis
Littman, Lewis, St. Louis
Loeffel, Ellen, St. Louis
Lonergan, Warren M., St. Louis
Lottes, J. Otto, St. Louis
Lowenstein, Paul, St. Louis
Luedde, Philip S., St. Louis
Lucido, Joseph L., St. Louis
Luten, Drew, St. Louis
Lyman, Edward H., St. Louis
McAdam, C. Rush, Normandy
McCaughan, John M., St. Louis
Macko, J. R., St. Louis
Macon, William L. Jr., St. Louis
Macnish, J. M., St. Louis
Malles, H. Conrad, St. Louis
Mannis, Ben G., St. Louis
Max, Paul F., St. Louis
Merklin, Anton L., St. Louis
Michael, V. E., St. Louis
Miller, Charles W., St. Louis
Millikin, L. A., St. Louis
Moore, Carl V., St. Louis
Morris, Mary E., St. Louis
Mueller, Clarence E., St. Louis
Mueller, Robert, St. Louis
Muether, R. O., St. Louis
Murphy, James P., St. Louis
Murawsky, W. V., St. Louis
Muschany, Norman K., St. Louis
Neilson, Arthur W., St. Louis
Nelson, Kenneth R., St. Louis
Nester, Charles A., St. Louis
Newman, Percy, St. Louis
Nicolai, Charles H., St. Louis
Norton, William H., St. Louis
Ogura, Joseph H., St. Louis
Olmsted, William H., St. Louis
O'Neal, Lawrence W., Clayton
O'Neill, John B., St. Louis
Oppenheimer, Henry E., Clayton
O'Reilly, D. Elliott, St. Louis
Orenstein, J. M., St. Louis
Paletta, F. X., St. Louis
Peden, B. W., Clayton
Peden, Joseph C., St. Louis
Pernoud, F. G., St. Louis
Pernoud, M. F., St. Louis
Piccione, L. N., Pine Lawn
Portuondo, B. C., St. Louis
Post, M. Hayward, St. Louis
Potter, Reese H., St. Louis
Pranger, Sylvester H., St. Louis
Probstein, J. G., St. Louis
Pruett, B. S., St. Louis
Pruett, H. S., St. Louis
Rainey, Robert, St. Louis
Ramsey, Robert H., Ferguson
Reich, H. A., St. Louis
Rendleman, George F., St. Louis
Repetto, Albert M., St. Louis
Rosenbaum, H. D., St. Louis
Rosenfeld, Henry, St. Louis
Roth, John J., St. Louis
Ryan, Robert E., St. Louis
Schaper, E. H., St. Louis
Schnoebelen, P. C., St. Louis
Schwartz, Frederick O., St. Louis
Sciortino, John S., St. Louis
Scopelite, Joseph A., St. Louis
Scott, Elwin P., St. Louis
Sertl, John D., St. Louis
Sewing, Arthur H., St. Louis
Sexton, Daniel L., St. Louis
Sharp, Austin R., St. Louis
Shen, Jerome T. Y., St. Louis
Sherard, J. C., St. Louis
Sherwin, Charles S., St. Louis
Signorelli, A. J., St. Louis
Simon, David L., St. Louis
Simon, Jerome I., St. Louis
Smith, Herbert P., St. Louis
Smith, Robert M., St. Louis
Soule, Samuel, St. Louis
Steinberg, Franz U., St. Louis
Stolar, Jacob, St. Louis
Stone, Charles A., St. Louis
Stoneman, William, St. Louis
Strauss, Arthur E., St. Louis
Sullivan, Clement, St. Louis
Thoma, George E. Jr., St. Louis
Thompson, J. William, St. Louis
Tichenor, Robert W., St. Louis
Titterington, P. F., St. Louis
Tjoflat, Oliver E., St. Louis
Tremain, I. G., St. Louis
Tucker, Eugene F., St. Louis
Vohs, Carl F., St. Louis
Von Kaenel, Joseph E., St. Louis
Wagenbach, W. F., St. Louis
Wall, Emmett D., St. Louis
Walters, Harold E., St. Louis
Walton, Franklin E., St. Louis
Wasserman, Helman, St. Louis
Weir, Don C., St. Louis
Weiss, R. S., St. Louis
Weyerich, L. F., St. Louis
Willman, V. L., St. Louis
Woods, Ralph E., St. Louis
Wotawa, William J., St. Louis
Yore, Richard W., St. Louis
Younger, Anita, St. Louis
Younger, Ernest, St. Louis
Zeinert, Oliver B., University City
Zillgitt, George H., St. Louis
Zingale, Frank G., St. Louis

### Fourth Councilor District—117

Allbee, Roger H., Festus
Bailey, William H., St. Louis
Berger, Edward J., St. Louis
Bergmann, M., St. Louis
Berry, Paul T., Troy
Birenbaum, Aaron, St. Louis
Brenner, Paul A., Owensville
Briscoe, John R., Maplewood
Brown, Eugene R., University City
Canty, Eugene J., St. Charles
Carrier, John A., St. Louis
Coates, Thomas, Richmond Heights
Coldwater, K. B., St. Louis
Creech, J. C., Troy
Davis, Edgar W., St. Louis
Deitchman, Robert B., St. Louis
Deyton, John W., St. Louis
Diehr, M. A., St. Louis
Doisy, Robert A., Glendale
Donnell, R. H., Crystal City
Drescher, Emmett B., St. Louis
Drum, Helen M., St. Louis
Ecker, D. B., Pacific
Eisenman, B. P., New Haven

Ellison, Leroy E., Maplewood
Falk, O. P. J., St. Louis
Feldman, David, Clayton
Finkel, B. W., St. Louis
Freiheit, H. J., St. Louis
Gedney, W. B., Valley Park
Goodman, N., Richmond Heights
Gowen, Leo F., Webster Groves
Grundmann, William H., St. Louis
Hagemann, Paul O., St. Louis
Hall, Eugene W., Ferguson
Hampton, Oscar P. Jr., St. Louis
Hetlage, Louis P., Troy
Hoelscher, H. F., Warrenton
Holscher, Edward C., St. Louis
Howe, Louis H., Brentwood
Jick, Sidney, St. Louis
Johnson, G. C., Marthasville
Judge, W. T., Crystal City
Kendis, J. B., St. Louis
Kimelman, N., St. Louis
King, E. E., St. Louis
Kingsland, Robert C., Webster Groves
Kister, George E., St. Charles
Koch, Robert E., Clayton
Kopp, Jules H., St. Louis
Kozal, Frank L., Crystal City
Lansche, W. Edward, Clayton
Leonhardt, E. M., St. Louis
Levey, S. A., University City
McCall, E. L., Brentwood
McNalley, F. P., St. Louis
Magness, Guy N., University City
Mayer, Robert A., University City
Mayfield, J. L., Crystal City
Mays, Frank G., Washington
Merrims, Theodore, St. Louis
Merz, J. J., St. Louis
Mezera, R. A., St. Louis
Milder, Benjamin, St. Louis
Miles, Paul W., St. Louis
Miller, Charles, Kirkwood
Monat, Seymour, St. Louis
Muench, H. O., Washington
Muenster, Vincent P., St. Charles
Oakley, John E., Clayton
Paddock, Richard, St. Louis
Pearl, John F., St. Clair
Peebles, J. B., Kirkwood
Phillips, Hanford, St. Louis
Poggemeier, W. H., St. Charles
Post, J. P., Washington
Randall, Don Q., St. Charles
Reese, A. Victor, Webster Groves
Reiches, A. J., Clayton
Reilly, P. J., St. Louis
Reister, Dorothy D., Kansas City
Rennard, Marvin, St. Louis
Roblee, Melvin A., St. Louis
Rosenstein, Daniel L., University City
Roth, Daniel, St. Louis
Rother, Paul H., St. Charles
Roufa, J. F., St. Louis
Ruhling, Rudy, St. Louis
Schattyn, Martyn, St. Louis
Schechter, S. E., Clayton
Schmidt, Edmund, St. Louis
Schmidt, H. H., Washington
Schwartz, Melvin M., St. Louis
Shaw, Carvel T., Hermann
Sommer, Ross B., St. Louis
Stein, H. J., St. Louis
Steiner, A. J., St. Louis
Sterling, John A., Kirkwood
Strehlman, B. G., Union
Sutter, Richard A., St. Louis
Tashma, Sigmund, St. Louis
Towers, O. W., St. Charles
Trueblood, A. C., St. Louis
Vinyard, Paul, St. Louis
Vitale, Anthony J., St. Louis
Vitale, Nicholas S., St. Louis
Votaw, Robert E., St. Louis
Walther, Roy A. Jr., St. Louis
Weinhaus, R., St. Louis
Wepprich, M. S., Washington
Whitener, Miles C., St. Louis
Whitener, Paul R., St. Louis
Williamson, O. E., St. Louis
Wulff, George, St. Louis
Wyatt, Lois C., Kirkwood
Yoskit, Harry, Festus
Zimmermann, H. B., St. Louis

## Fifth Councilor District—68

Allen, W. C., Jefferson City
Andersen, E. J. T., Montgomery City
Asel, Norman D., Columbia
Baker, James M., Columbia
Belden, E. A., Jefferson City
Belinson, Louis, Jefferson City
Bloom, W. A., Fayette
Buesseler, John A., Columbia
Burns, Thomas W., Columbia
Chamberlain, G. L., Boonville
Clark, Kendall A., Jefferson City
Cochran, Donald Q., Columbia
Cremer, William J., Fulton
Deitrich, Karl D., Columbia
Durst, Henry, Fulton
Dwyer, Thomas L., Mexico
Epple, Kathryn C., Mexico
Epple, Lawrence K., Mexico
Exon, C. S., Jefferson City
Gardner, J. W., Glasgow
Garner, Lynn, Jefferson City
Groce, George, Fulton
Gunn, Jack, Versailles
Gurnee, L. H., Jefferson City
Hardwicke, H. M., Jefferson City
Jolly, Benjamin, Mexico
Kauffman, Ruth, Versailles
Ladenson, Roland, Columbia
Landor, John H., Columbia
Lodwick, Gwilym S., Columbia
Loyd, Earl L., Jefferson City
McHaney, John W., Jefferson City
Marienfeld, Carl J., Columbia
Martt, Jack M., Columbia
Matthews, John I., Jefferson City
Mayer, William D., Columbia
Meinershagen, C. W., Jefferson City
Modlin, John, Columbia
Moranville, B. A., Columbia
Neal, M. Pinson, Columbia
Rall, Kenneth L., Columbia
Ray, Thorpe, Columbia
Ritterbusch, James K., Fulton
Rodes, Ned D., Mexico
Rodgers, Elrie P., Columbia
Russell, Joseph P., Jefferson City
Schewe, E. J., Columbia
See, William B., Columbia
Shaw, William J., Fayette
Shull, G. Donald, Jefferson City
Spratt, John S. Jr., Columbia
Stephan, August P., Jefferson City
Stephenson, Hugh E. Jr., Columbia
Stewart, William J., Columbia
Stuart, Byron M., Boonville
Summers, Joseph S., Jefferson City
Tanner, R. H., Jefferson City
Tellez, Edward R., Fulton
Walters, John H., Columbia
Walters, Laura, Columbia
Ward, Robert L., Centralia
Washburn, J. L., Versailles
Watts, Byron E., Jefferson City
Wayland, Thomas A., Camdenton
Wilson, Vernon E., Columbia
Windmiller, M. E., Columbia
Winn, G. W., Boonville
Ziegler, Anthony, Vandalia

## Sixth Councilor District—29

Aiken, George A., Marshall
Allen, William H., Nevada
Barger, O. B., Harrisonville
Baska, R. E., Butler
Bradshaw, W. D., Clinton
Campbell, Albert J., Sedalia
Crozier, F. A., Richmond
Folkner, A., Warrensburg
Giesler, D. H., Osceola
Gonzales, M. Garza, Warrensburg
Harkness, Harry, Warrensburg
Haynes, Robert C., Marshall
Hopkins, Thomas J., Sedalia
Jones, Edna M., Clinton
Jones, Edward S., Harrisonville
Kelling, Jordan, Waverly
King, Richard H., Clinton
Lederer, Charles L., Warrensburg
Luter, Carter W., Butler
McCorkle, E. Lee, Marshall
Maddox, Albert R., Sedalia
Martin, W. E., Odessa
Pearse, Roy W. Jr., Nevada
Richter, William B., Stockton
Siegel, Carl D., Sedalia
Smith, James O., Clinton
Stauffacher, C. Gordon, Sedalia
Walker, G. S., Clinton

## Seventh Councilor District—51

Andrews, Berneil W., Kansas City
Bell, William F., Lee's Summit
Benoit, Hector W. Jr., Kansas City
Berry, Maxwell G., Kansas City
Bowser, John F., Kansas City
Buckingham, W. W., Kansas City
Buhler, Victor B., Kansas City
Byers, P. L., Kansas City
Caldwell, John K., Kansas City
Coffey, R. R., Kansas City
Cooper, Charles S., Kansas City
Decker, A. I., Kansas City
Dorsch, E. H., Independence
Duncan, Ralph E., Kansas City
Eubank, D. M., Raytown
Graham, Wallace H., Kansas City
Green, John R., Independence
Griffith, John A. Jr., Kansas City
Growdon, John A., Kansas City
Hart, Wayne, Kansas City
Hartwig, F. H., Kansas City
Hollweg, Kenneth C., Kansas City
Hunt, Claude J., Kansas City
Katz, Milton, Kansas City
Keeler, James E., Kansas City
Kent, C. F., Kansas City
Kiene, Richard H., Kansas City
Kranson, S. J., Independence
Lapi, Angelo, Kansas City
Leitch, C. G., Blue Springs
McCubbin, C. R., Kansas City
McVay, James R., Kansas City
McVay, James R. Jr., Kansas City
MacInnis, Florence, Kansas City
Miller, Gerald L., Kansas City
Mixson, William C., Kansas City
Multhauf, C. J., Mission, Kansas
Myers, W. A., Kansas City
Pakula, Sidney F., Kansas City
Peete, Don Carlos, Kansas City
Perry, Ralph, Kansas City
Reister, Philip D., Kansas City
Sanders, W. F., Kansas City
Stelmach, W. J., Kansas City
Stockton, Raymond W., Kansas City
Theel, Otto W., Kansas City
Trowbridge, B. C., Kansas City
Wade, Frederick E., Kansas City
Wheeler, Charles, Kansas City

## Eighth Councilor District—57

Allen, J. H., Springfield
Auner, Cecil R., Springfield
Bareis, R. J., Marshfield
Barnett, Norman H., Joplin
Bonebrake, M. D., Springfield
Brasher, C. A., Mount Vernon
Callaway, G. D. Jr., Springfield
Cohle, Richard R., Carthage
Coller, Fred, Springfield
Delzell, W. A., Springfield
DeTar, Burleigh E. Jr., Joplin
Donley, Robert R., Monett
Evans, Harry T., Branson
Farthing, Gene, Springfield
Ferguson, John P., Springfield
Ferguson, L. H., Joplin
Ferrell, T. E., Springfield
Gentry, M. L., Springfield
Glover, Kenneth, Mount Vernon
Graves, A. J., Mount Vernon
Griffin, Evelyn, Buffalo
Griffin, O. A., Buffalo
Hall, Durward G., Springfield
H'Doubler, Francis T., Springfield
H'Doubler, F. T. Jr., Springfield
Holmes, Daniel E., Springfield
Ivy, H. B., Springfield
Jeans, Virgil E., Joplin
Johnston, J. L., Springfield
Knabb, Kenneth E., Springfield
Koehler, John W., Joplin
Lemmon, G. B. Jr., Springfield
Lockhart, C. E., Springfield
McAlhany, H. J., Springfield
McCallum, A. J. C., Aurora
McCraw, Doyle, Bolivar
McNew, W. T., Carthage
Macdonnell, Thomas, Marshfield
Magness, W. C., Branson
Maher, Robert W., Springfield
Moseley, F. Thomas, Springfield
Napper, Marvin L., Springfield
Newman, Mary, Cassville
Peterson, Stanley S., Springfield
Powell, Edwin M., Springfield
Schulte, G. A., Joplin
Scorse, Sidney W., Joplin
Sewell, W. S., Springfield
Silsby, Harry D., Springfield
Smith, C. Souter, Springfield
Snead, William H., Springfield
Turner, Glenn O., Springfield
Upshaw, Paul O., Springfield
Whitten, M. Foster, Carthage
Williams, John W., Springfield
Wommack, Fred L., Crane
Yancey, Daniel L., Springfield

## Ninth Councilor District—10

Bass, B. J., Salem
Cooper, Claude W., Thayer
Fowler, Marvin L., West Plains
Froelich, R. W., Lebanon
Hammler, Christiana V., St. James
Miller, Harold W., Willow Springs
Stricker, E. A., St. James
Summers, J. H., Lebanon
Underwood, M. K., Rolla
Wall, Joe A., Houston

### Tenth Councilor District—35

Appleberry. C. H., Flat River
Barnes, Seth S., Cape Girardeau
Biggs, Fred J., Poplar Bluff
Bull, Ben M., Ironton
Campbell, Edward D., Cape Girardeau
Canlas, E. M., Poplar Bluff
Carleton, C. E., Farmington
Clay, H. S., Poplar Bluff
Cook, O. W., Caruthersville
Dunmire, George Q., Kennett
English, W. D., Cardwell
Fairchild, J. F., Perryville
Finney, W. O., Chaffee
Fischer, Theodore, Altenburg
Grossman, Marvin, Fredericktown
Hansbrough, E. T., Poplar Bluff
Kasten, Melvin C., Cape Girardeau
Kratz, Paul E., Cape Girardeau
Legner, S. G., Perryville
McDermott, A. E., Perryville
McDonald, E. F., Jackson
Macauley, B. J., Poplar Bluff
Nunnelly, Gordon M., Cape Girardeau
Nussbaum, Paul B., Cape Girardeau
Otto, Thomas G., Cape Girardeau
Post, Cyril A., Poplar Bluff
Rapp, Harold B., Cape Girardeau
Ritter, Raymond A., Cape Girardeau
Ruff, T. E., Poplar Bluff
Shoss, Milton, Cape Girardeau
Spence, E. L., Kennett
Taylor, Van W.. Bonne Terre
Waddle, T. L., Dexter
Wilson, Charles F., Cape Girardeau
Zimmerman, Joe A., Kennett

### Guest Speakers—20

Cooley, Denton A., Houston
Douglas, R. Gordon, New York
Furcolow, Michael L., Kansas City, Kansas
Harken, Dwight E., Boston
Hsia, David Yi-Yung, Chicago
Huebner, Robert J., Bethesda, Md.
Maher, Clement L., St. Louis
Miller, Cecil Arden, Kansas City, Kansas
Miller, William F., Dallas
Moulder, Peter V., Chicago
Pollock, T. Hartley, St. Louis
Ricketts, Henry T., Chicago
Rostenberg, Adolph, Chicago
Schreier, Phil C., Memphis
Scott, H. William Jr., Nashville
Smith, Jackson A., Chicago
Talbott, John H., Chicago
Welsch, Charles N. Jr., St. Louis
Wilson, Frank B., Brentwood
Wood, W. Barry, Baltimore

There were registered 783 physicians, 83 medical technologists, 180 Woman's Auxiliary, 190 exhibitors, 99 guests and students. Total registration was 1,335.

## ANNUAL MEETING OF THE MISSOURI STATE MEDICAL FOUNDATION, CHASE HOTEL, ST. LOUIS, MARCH 19, 1962

The meeting was called to order by R. O. Muether, M.D., President, at 6:30 p.m. A quorum was declared present. Dr. Muether explained that this was the first meeting of the Foundation membership as set forth in the By-Laws. He also quoted the following from the By-Laws: "Membership in the Missouri State Medical Foundation shall be composed of and limited to members in good standing of the Missouri State Medical Association."

President Muether presented the following status of the Foundation as of March 19, 1962:

| | |
|---|---|
| *Income From* | |
| Missouri State Medical Association | $75,000 |
| Two Private Donors | 1,600 |
| Two County Medical Societies | 150 |
| | $76,750 |
| Total Amount Disbursed | 61,830 |
| Balance | $14,920 |
| *To Medical Students* | |
| Total Loans Made | 130 |
| Total Amount Disbursed | $61,830 |
| Total Number Students Receiving Loans | 73 |
| At Missouri University | 60 |
| At St. Louis University | 8 |
| At Washington University | 1 |
| At Baylor University | 1 |
| At Tulane University | 1 |
| At Albert Einstein School of Medicine | 1 |
| At Meharry | 1 |
| Total | 73 |

The President reported that the Foundation had received a Federal Tax exemption letter dated January 29, 1962 declaring the Foundation exempt from Federal Income Tax and also declaring contributions made to the Foundation by donors deductible on their Federal Income Tax reports.

Dr. Muether called for the next order of business which was the election of the Board of Trustees of six members. He explained that the President of the Missouri State Medical Association serves annually as an ex-officio member of the Board. He pointed out that all loan applications to the Foundation are passed upon by a Committee of the Board. He then stated that inasmuch as the Council of the MSMA had been the organizing force behind the establishment of the Foundation, he had requested the Council to serve as a Nominating Committee and present a slate of six members for election to the Board of Trustees. The Chairman of the Council presented the following slate:

For a one year term, Kenneth Hollweg, M.D., Kansas City; for a two year term, Leonard Furlow, M.D., St. Louis; for a three year term, R. O. Muether, M.D., St. Louis; for a four year term, Ben Bull, M.D., Ironton; for a five year term, W. W. Tillman Jr., M.D., Springfield; for a five year term, Charles Doyle, M.D., St. Louis. The President then called for additional nominations from the floor. None being presented, he requested a motion to have the slate presented by the Council duly elected and the Secretary cast the unanimous vote of the membership assembled. Such a motion was duly made and passed and the slate of directors, as presented by the Nominating Committee, declared elected.

Under new business, Dr. Furlow discussed the matter of securing a blanket life insurance policy covering the recipients of Foundation loans in the amount of the loans so that in the event of death of a loan recipient, before the loan had been repaid, the Foundation would be protected.

Mr. McIntyre, Assistant Secretary, presented information and figures from two well recognized insurance companies relating to Dr. Furlow's discussion. A motion was made, seconded, and passed that the Board of Trustees secure such a blanket policy as discussed.

There being no further business, President Muether called for a short meeting of the Board of Trustees to immediately follow the close of this first annual meeting of the Foundation.

## MISSOURI STATE MEDICAL FOUNDATION BOARD OF TRUSTEES, CHASE HOTEL, ST. LOUIS, MARCH 19, 1962

The meeting of the Board of Trustees was called to order by R. O. Muether, M.D., President, at 6:45 p.m., immediately following the adjournment of the annual meeting of the Missouri State Medical Foundation. Present were: Drs. R. O. Muether, Leonard T. Furlow, St. Louis; Dr. Ben M. Bull, Ironton; Dr. Kenneth C. Hollweg, Kansas City; Dr. Donald M. Dowell, Chillicothe; Dr. J. H. Summers, Lebanon, and Mr. Ray McIntyre, St. Louis.

Dr. Muether explained that the purpose of this meeting was for the election of officers, following which he requested nominations for President. The name of Dr. Leonard Furlow was placed in nomination. No further nominations were offered and Dr. Furlow was unanimously elected President.

Nominations for Vice President were called for and the name of Dr. Kenneth Hollweg of Kansas City was

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**If you have been prescribing the older corticosteroids—** such as prednisone, prednisolone, hydrocortisone or cortisone, and have hesitated to prescribe the newer corticosteroids because of economic consideration for your patients, you can now secure all of the clinical advantages of dexamethasone at approximately the same prescription expense. Mg. for mg., HEXADROL is approximately 6 times more potent than triamcinolone or methylprednisolone...8 times more potent than prednisone or prednisolone...28 times more potent than hydrocortisone...and 35 times more potent than cortisone.

**If you are now prescribing the newer corticosteroids—** such as triamcinolone, betamethasone, paramethasone or another brand of dexamethasone, because of reduced risk of sodium and fluid retention, potassium depletion, or disturbance of glucose metabolism—you can obtain all of these benefits with HEXADROL, at marked savings—yet with complete assurance of unsurpassed quality and therapeutic effect.

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placed in nomination. No other nominations were offered and Dr. Hollweg was unanimously elected Vice President.

Nominations were requested for Secretary-Treasurer and the name of Charles Doyle of St. Louis was presented. There being no additional nominations, Dr. Doyle was unanimously elected Secretary-Treasurer.

A motion was made, seconded and passed that a committee of the Board be authorized to make loans to medical students, residents of Missouri, in the name of the Missouri State Medical Foundation, using funds of the Foundation for that purpose.

Mr. Ray McIntyre was appointed Assistant Secretary to assist in the administration of the Foundation's program.

There being no further business, the Board of Trustees adjourned at 7:00 p.m.

Charles R. Doyle, M.D., *Secretary*

# Missouri Medical Meetings

Missouri State Medical Association, Hotel Muehlebach, Kansas City, March 24-27, 1963.
Missouri Academy of General Practice, Hotel Chase, St. Louis, Nov. 3-4, 1962.

## Component Society Meeting Dates

Audrain County Medical Society—third Monday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler-Ripley-Wayne County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month, September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—fourth Tuesday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—first Tuesday of each month at the St. Francis Hospital, Washington, at 7:00 p.m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb)—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—March, May, October and December.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets fourth Tuesday of each month.
Johnson County Medical Society—meets only on call.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p.m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Lincoln-St. Charles County Medical Society—fourth Tuesday of each month.
Marion-Ralls-Shelby County Medical Society—third Tuesday of each month, 7:30 p.m.
Mid-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)—fourth Thursday of each month.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Nodaway-Holt-Atchison-Gentry-Worth County Medical Society—first Monday in February, April, October and December.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)—second Tuesday of each month, September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month, September through May.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—third Tuesday of each month, October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month, September through May.
South Central Counties Medical Society (Howell-Oregon-Texas-Wright-Douglass-Ozark)—fourth Wednesday of each month.
Webster County Medical Society—meets only on call.
West Central Missouri Society (Bates-Cass-St. Clair-Vernon-Cedar)—second Thursday of each month.

# Officers and Committees

## MISSOURI STATE MEDICAL ASSOCIATION

105th Annual Session, Kansas City

March 24, 25, 26, 27, 1963

President, Donald M. Dowell, Chillicothe.
President-Elect, Kenneth C. Hollweg, M.D., Kansas City.
Vice Presidents, C. G. Stauffacher, Sedalia; Forrest C. Long, Savannah; E. L. Spence, Kennett.
Secretary, John I. Matthews, Jefferson City.
Treasurer, Charles R. Doyle, St. Louis.
Editor, Joseph V. Finnegan, St. Louis.
Assistant Editor, Helen Penn, St. Louis.
Executive Assistant, Thomas P. Fox, St. Louis.
Field Secretary, Raymond McIntyre, St. Louis.
Executive Secretary, Tom R. O'Brien, St. Louis. Executive Office, 623 Missouri Theatre Bldg., 634 N. Grand Blvd., St. Louis 3, Mo. Jefferson 1-0404.

### Delegates to the American Medical Association

Richard H. Kiene, Kansas City; alternate, Rolla B. Wray, Nevada. A. W. Neilson, St. Louis; alternate, Robert Kelley, St. Louis. 1962-1963. Durward G. Hall, Springfield; alternate, Guy N. Magness, University City. H. E. Petersen, St. Joseph; alternate, J. Loren Washburn, Versailles. 1963-1964.

### Standing Committees

**Scientific and Postgraduate Work**—John I. Matthews, Jefferson City, Chairman (1963); Gerald L. Miller, Kansas City (1963); M. Pinson Neal, Columbia (1965); Wyeth Hamlin, Hannibal (1964); Peter G. Danis, St. Louis (1964). **Associate Members**—Melvin C. Kasten, Cape Girardeau; Carl H. Almond, Columbia; Robert W. Smith, Marceline; Richard W. Yore, St. Louis; J. F. McDonnell, Kansas City.

**Defense**—C. E. Hyndman, St. Louis, Chairman (1963); L. P. Forgrave, St. Joseph (1964); Harold W. Miller, Willow Springs (1964); Roland S. Kieffer, St. Louis (1965); W. W. Gist, Kansas City (1965).

**Medical Education and Hospitals**—William A. Knight Jr., St. Louis, Chairman (1965); Joseph C. Peden Jr., St. Louis (1964); Vernon E. Wilson, Columbia (1964); Ralph Perry, Kansas City (1963); Kenneth Glover, Mount Vernon (1965). **Associate Member**—Henry C. Bauman, Maryville.

**Cancer**—Charles E. Lockhart, Springfield, Chairman (1964); George A. Carroll, St. Louis (1965); John E. Lamy, Sedalia (1964); Joseph L. Fisher, St. Joseph (1963); James R. McVay Jr., Kansas City (1965). **Associate Members**—E. J. Schewe, Columbia; H. C. Stricker, Jefferson City; Henry C. Allen, St. Louis; G. Neil Berry, Kansas City; John H. Platz, Carrollton.

**Medical Economics**—G. W. Winn, Boonville, Chairman (1965); John R. Forgrave, St. Joseph (1964); Byron E. Watts, Jefferson City (1964); Martin P. Hunter, Kansas City (1963); Richard L. Sterkel, St. Louis (1965). **Associate Members**—Kenneth E. Knabb, Springfield; E. T. Hansbrough, Poplar Bluff; Rae W. Froelich, Lebanon; Chester L. Clark, Trenton.

**Mental Health**—George W. Forman, St. Joseph, Chairman; James N. Haddock, Webster Groves; Henry V. Guhleman, Jefferson City; William I. Stryker, St. Louis; D. R. Edwards, Sedalia; A. L. Brown, Springfield; George H. Lawrence, St. Louis; N. Venay Bolin, Kansas City; James M. A. Weiss, Columbia (1963).

**Maternal Welfare**—A. C. Trueblood, Clayton, Chairman (1964); H. C. Willumsen, St. Joseph (1965); William B. See, Columbia (1965); James E. Keeler, Kansas City (1964); Irwin T. Craig, Joplin (1963). **Associate Members**—C. G. Staufaucher, Sedalia; E. E. Wadlow, St. Joseph; Paul E. Kratz, Cape Girardeau; J. J. Wimp, Kirksville; MacDonald Bonebrake, Springfield; Eugene G. Hamilton, St. Louis; Robert S. Brown, Kansas City; Seymour Monat, St. Louis; V. D. Vandiver, Chillicothe.

**Infant and Child Care**—James A. Kinder, Cape Girardeau, Chairman; E. J. Schwartz, Springfield; Daniel B. Landau, Hannibal; H. E. Petersen, St. Joseph; R. J. LaDriere, St. Louis; Guy N. Magness, University City; Clement E. Brooke, Columbia; James J. Pascoe, Nevada; Jack N. Wiles, West Plains; S. F. Cockerell, Independence (1963).

**Constitution and By-Laws**—W. A. Bloom, Fayette, Chairman (1963); John F. Rutledge, Crystal City (1964); R. O. Muether, St. Louis (1964); H. M. Parker, Kansas City (1965); James R. Meador, Clayton (1965).

**Trauma**—Robert E. Funsch, St. Louis, Chairman (1964); Paul W. Meyer, Kansas City (1965); Richard E. Lord, St. Louis (1965); Alan C. McAfee, St. Louis (1963); Thomas G. Otto, Cape Girardeau (1963). **Associate Members**—Howard J. McAlhaney, Springfield; Otis E. James, Kansas City; John R. McDaniel, St. Joseph.

**Eye Health**—John McLeod, Kansas City, Chairman (1965); Michael F. Pernoud, St. Louis (1964); H. B. Ivy, Springfield (1964); Paul G. Wolff, Cape Girardeau (1963); H. B. Stauffer, Jefferson City (1965). **Associate Members**—Dick H. Underwood, Kansas City; S. Albert Hanser, St. Louis; Paul M. Beck, St. Joseph; D. E. Eggleston, Macon; W. L. Post, Joplin; John A. Buesseler, Columbia; George Mandler, Chillicothe; Robert S. Minton, St. Joseph.

**Laboratory Medicine**—Eugene F. Tucker, St. Louis, Chairman (1964); Fred C. Coller, Springfield (1963); T. J. Cooper, St. Louis (1963); Henry H. Sweets, Hannibal (1965); Charles B. Wheeler, Kansas City (1965).

**Industrial Health**—Douglas A. Ries, St. Louis, Chairman (1963); H. M. Roebber, Bonne Terre (1963); Vencel W. Hollo, St. Louis (1964); William H. Duncan, Kansas City (1964); S. W. Scorse, Joplin (1965). **Associate Members**—James W. Clawson, Springfield; C. Rush McAdam, St. Louis; Richard A. Sutter, University City; C. H. Appleberry, Rivermines.

**Diabetes**—H. E. Oppenheimer, Clayton, Chairman (1963); G. Bruce Lemon, Springfield; H. M. Gilkey, Kansas City (1964); Lucien W. Ide, St. Joseph (1965); Charles M. Lamke, Columbia (1963). **Associate Members**—William H. Olmsted, St. Louis; Harold K. Roberts, St. Louis; Ralph S. Casford, Kansas City; Thomas W. Burns, Columbia; Jack L. Vinyard, Carrollton; Robert E. Koch, Clayton.

**Anesthesiology**—Walter W. Tillman, Springfield, Chairman (1963); S. Ross Melgaard, Kansas City (1964); George W. Chesney, Joplin (1964); Carl K. Ness, St. Joseph (1963); Edward O. Kraft, St. Louis (1965). **Associate Member**—Kenneth K. Keown, Columbia.

**Hospital and Professional Relations**—Ralph Perry, Kansas City, Chairman (1963); Hollis N. Allen, St. Louis (1964); Walter S. Sewell, Springfield (1964); J. H. Summers, Lebanon (1965); Stanley S. Peterson, Springfield (1963). **Associate Member**—Willard Bartlett, St. Louis.

**Control of Venereal Disease**—Edwin M. Powell, Springfield, Chairman (1965); John E. Byrne, St. Louis (1964); A. W. Neilson, St. Louis (1964); Robert B. Bristow, St. Joseph (1963); T. E. McMillan, Kansas City (1965). **Associate Members**—Ralph W. Bohnsack, Brookfield; G. R. Wempe, Maryville.

**Physical Medicine and Rehabilitation**—D. Elliott O'Reilly, St. Louis, Chairman (1964); F. O. Tietjen, Jefferson City (1964); Robert H. Fitzgerald, Independence (1963); F. D. Sundstrom, Springfield (1965); James M. Baker, Columbia (1965). **Associate Members**—Otakar Machek, St. Louis; Edward B. Shires, Kansas City; John W. Deyton, St. Louis; James W. Willoughby, Liberty.

**Civil Defense Disaster Medical Care**—Carl D. Siegel, Sedalia, Chairman; M. P. Leech, Fayette; H. D. Steinbeck, Union; Carroll P. Hungate, Kansas City; John L. Mothershead, St. Joseph; John H. Waltersheid, Hannibal; Curtis H. Lohr, Clayton; R. Ned White, Springfield; George E. Thoma, St. Louis; George L. Watkins, Farmington; O. P. Hampton, University City; J. S. Sanders, Jefferson City (1963).

**Aging**—Stanley S. Peterson, Springfield, Chairman (1964); R. O. Muether, St. Louis (1964); Ralph Perry, Kansas City (1963); C. Thorpe Ray, Columbia (1963); Rolla B. Wray, Nevada (1965). **Associate Members**—Robert C. Kingsland, Clayton; Robert H. Tanner, Jefferson City; Don H. Giesler, Osceola; John A. Griffith, Kansas City.

**Radiology and Ionizing Radiation**—Wendell G. Scott, St. Louis, Chairman (1963); Milton Shoss, Cape Girardeau (1964); Louis A. Scarpellino, Kansas City (1964); Marvin L. Napper, Springfield (1965); Mark D. Eggleton, Clayton (1965). **Associate Members**—J. Stewart Whitmore, Kansas City; Gwilym S. Lodwick, Columbia.

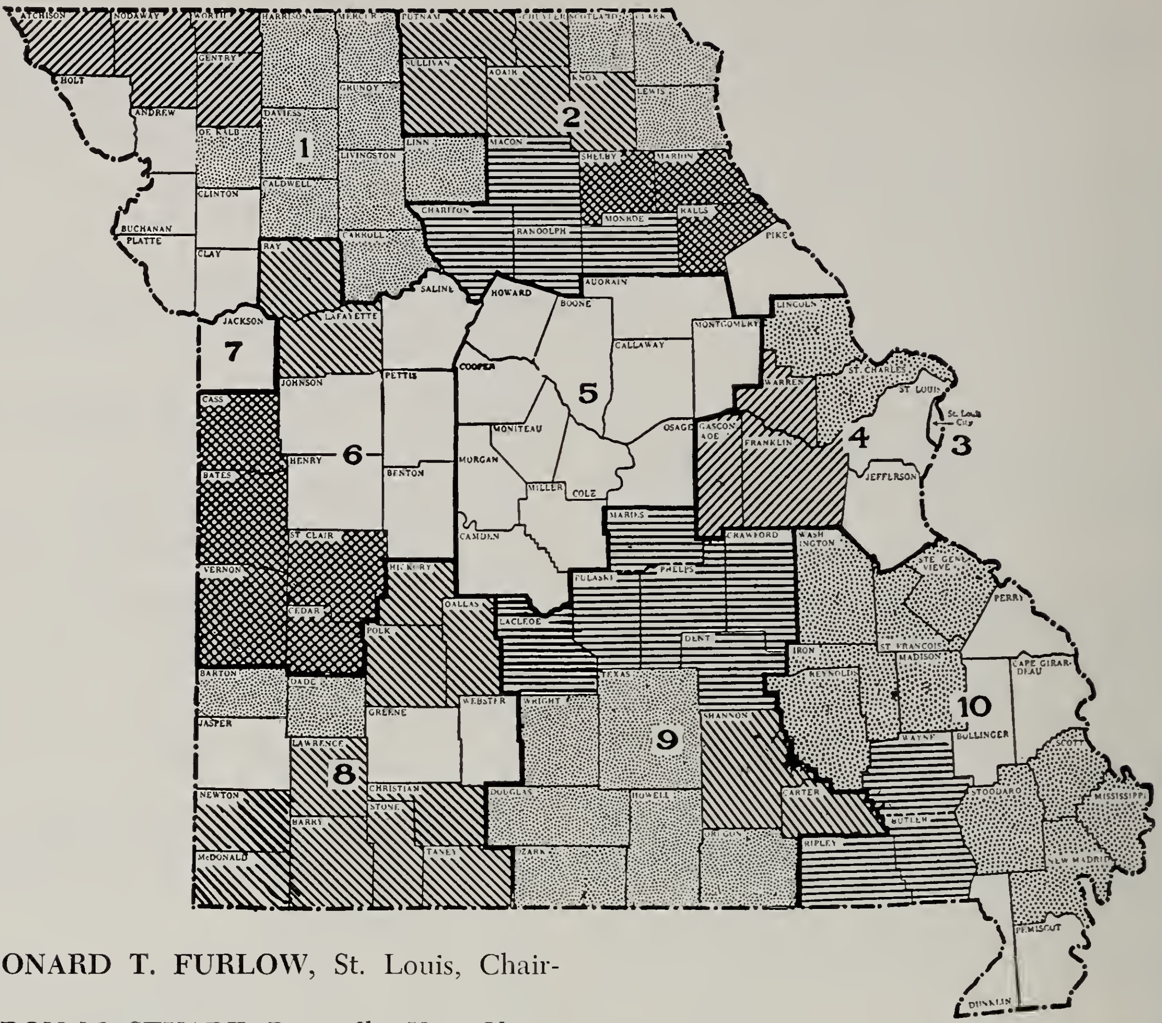
**Tuberculosis**—Florence E. MacInnis, Kansas City, Chairman; Paul Murphy, St. Louis; H. M. Roberts, Kansas City; Joseph L. Lucido, St. Louis; Walter C. Gray, St. Louis; David N. Kerr, St. Louis; John W. Polk, Springfield; Carl G. Popp, Sikeston; Judson I. Chalkley, Columbia; Joseph A. Conrad, Chillicothe (1963).

**Study of Cardiac Disease**—James G. Janney, St. Louis, Chairman; Earl L. Loyd, Jefferson City; William I. Park, Springfield; William J. Shaw Sr., Fayette; Jack M. Martt, Columbia; William L. Mundy, Kansas City; William J. Gillespie, St. Louis; Caryl A. Potter, St. Joseph; F. J. Biggs, Poplar Bluff; Joseph C. Edwards, St. Louis; Joseph F. Gale, Chillicothe (1963).

**Rural Medical Service**—B. J. Bass, Salem, Chairman; Robert E. Tribble, Chaffee; James H. Sweiger, Maysville; K. S. Latham, California; Harold F. Hoelscher, Warrenton; James E. Campbell, Macon; Charles A. Worley, Sweet Springs; Fred L. Womack, Crane (1963).

**American Medical Education Foundation**—James P. Murphy, St. Louis, Chairman; C. Stuart Exon, Jefferson City; William T. McNew, Carthage; Russell D. Sheldon, Kansas City; Allen I. Herman, St. Joseph; E. W. Allen, Carrollton (1963).

# Councilor Districts and Counties in Each District


ATCHISON
NODAWAY
WORTH
HARRISON
MERCER
PUTNAM
SCHUYLER
SCOTLAND
CLARK
HOLT
GENTRY
SULLIVAN
ADAIR
KNOX
GRUNDY
LEWIS
ANDREW
DE KALB
DAVIESS
2
1
LINN
MACON
SHELBY
MARION
LIVINGSTON
CLINTON
CALDWELL
CHARITON
MONROE
RALLS
BUCHANAN
PLATTE
CARROLL
RANDOLPH
PIKE
CLAY
RAY
SALINE
HOWARD
AUDRAIN
BOONE
LINCOLN
JACKSON
LAFAYETTE
MONTGOMERY
7
CALLAWAY
COOPER
ST. CHARLES
PETTIS
JOHNSON
WARREN
ST. LOUIS
5
St. Louis City
CASS
MONITEAU
OSAGE
GASCONADE
4
3
HENRY
6
FRANKLIN
MORGAN
BENTON
BATES
JEFFERSON
MILLER
COLE
MARIES
ST. CLAIR
CAMDEN
CRAWFORD
WASHINGTON
HICKORY
STE. GENEVIEVE
VERNON
PULASKI
PHELPS
PERRY
DALLAS
CEDAR
LACLEDE
POLK
DENT
IRON
ST. FRANCOIS
MADISON
CAPE GIRARDEAU
BARTON
REYNOLDS
DADE
TEXAS
WEBSTER
WRIGHT
10
GREENE
JASPER
SHANNON
9
BOLLINGER
LAWRENCE
WAYNE
8
SCOTT
CHRISTIAN
STODDARD
NEWTON
DOUGLAS
HOWELL
CARTER
MISSISSIPPI
STONE
BARRY
BUTLER
TANEY
OZARK
OREGON
RIPLEY
NEW MADRID
McDONALD
PEMISCOT
DUNKLIN

**LEONARD T. FURLOW**, St. Louis, Chairman.

**BYRON M. STUART**, Boonville, Vice Chairman.

**First District:** Councilor, Joseph L. Fisher, St. Joseph. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Linn, Livingston, Mercer, Nodaway, Platte, Worth.

**Second District:** Councilor, A. P. Rowlette, Moberly. Counties: Adair, Chariton, Clark, Knox, Lewis, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, Leonard T. Furlow, St. Louis. Counties: St. Louis City.

**Fourth District:** Councilor, Paul R. Whitener, St. Louis. Counties: Franklin, Gasconade, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, Byron M. Stuart, Boonville. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Howard, Miller, Moniteau, Montgomery, Morgan, *Osage*.

**Sixth District:** Councilor, O. B. Barger, Harrisonville. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, Ray, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Hector W. Benoit Jr., Kansas City. County: Jackson.

**Eighth District:** Councilor, Doyle C. McCraw, Bolivar. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. A. Stricker, St. James. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Maries, Oregon, Ozark, Phelps, Pulaski, Shannon, Texas, Wright.

**Tenth District:** Councilor, W. D. English, Cardwell. Counties: *Bollinger*, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

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Shaded areas show hyphenated component societies. Counties listed in italics are unorganized.

# Component Societies in Affiliation With the Missouri State Medical Association

| County | District | President | Address | Secretary | Address |
|---|---|---|---|---|---|
| Andrew | 1 | V. R. Wilson | Rosendale | Warren C. Baker | Savannah |
| Audrain | 5 | Lawrence K. Epple | Mexico | Anthony Zeigler | Vandalia |
| Barton-Dade | 8 | Herbert M. Arnold | Lamar | T. W. Carroll | Lamar |
| Benton | 6 | | | James A. Logan | Warsaw |
| Boone | 5 | Thomas W. Burns | Columbia | Jack M. Martt | Columbia |
| Buchanan | 1 | John R. Forgrave | St. Joseph | Herbert C. Senne | St. Joseph |
| Butler-Ripley-Wayne | 10 | E. T. Hansbrough | Poplar Bluff | John L. Wright | Poplar Bluff |
| Callaway | 5 | George Groce | Fulton | V. B. Jackson | Fulton |
| Cape Girardeau | 10 | Thomas G. Otto | Cape Girardeau | Fred Rawlins | Cape Girardeau |
| Carter-Shannon | 9 | H. D. Rollins | Winona | | |
| Chariton-Macon-Monroe-Randolph | 2 | Gretchen Collins | Macon | J. Will Fleming, Jr. | Moberly |
| Clay | 1 | Theodore F. Edwards | N. Kansas City | John B. Withrow | N. Kansas City |
| Clinton | 1 | W. B. Spaulding | Plattsburg | J. P. Mabrey | Plattsburg |
| Cole | 5 | C. Stuart Exon | Jefferson City | James T. Leslie, Jr. | Jefferson City |
| Cooper | 5 | G. L. Chamberlain | Boonville | D. Hata | Boonville |
| Dallas-Hickory-Polk | 8 | C. H. Barnett | Bolivar | Mary E. P. Griffin | Buffalo |
| Dunklin | 10 | William E. Morehead | Kennett | E. L. Spence | Kennett |
| Franklin-Gasconade-Warren | 4 | Michaeal S. Wepprich | Washington | Samuel C. Bonney | Washington |
| Grand River Medical Society (Caldwell-Livingston-Carroll-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb) | 1 | Ralph W. Bohnsack | Brookfield | Frank R. Daley | Hamilton |
| Greene | 8 | Stanley S. Peterson | Springfield | Francis M. Maple | Springfield |
| Henry | 6 | Richard H. King | Clinton | R. S. Hollinsworth | Clinton |
| Howard | 5 | J. W. Gardner | Glasgow | M. P. Leech | Fayette |
| Jackson | 7 | A. Lloyd Stockwell | Kansas City | Ira T. Smith | Kansas City |
| Jasper | 8 | G. A. Schulte | Joplin | David O. Allen | Joplin |
| Jefferson | 4 | B. Bolgar | Festus | Frank L. Kozal | Crystal City |
| Johnson | 6 | Harry Harkness | Warrensburg | M. Garcia Gonzales | Warrensburg |
| Lafayette-Ray | 6 | George K. Davault | Richmond | Wayne Boydston | Odessa |
| Lewis-Clark-Scotland | 2 | J. R. Bridges | Kahoka | L. Y. Davis | Canton |
| Lincoln-St. Charles | 4 | Paul H. Rother | St. Charles | Vincent P. Muenster | St. Charles |
| Marion-Ralls-Shelby | 2 | Lysle M. Bach | Hannibal | Wyeth Hamlin | Hannibal |
| Mid-Missouri County Medical Society (Phleps-Crawford-Dent-Pulaski-Maries-Laclede) | 9 | George Fisher | Lebanon | M. K. Underwood | Rolla |
| Miller | 5 | Edward O. Shelton | Eldon | C. T. Buehler | Eldon |
| Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve) | 10 | R. A. Huckstep | Farmington | W. Paul Dennis | Flat River |
| Moniteau | 5 | K. S. Latham | California | L. M. Gallagher | California |
| Montgomery | 5 | E. J. T. Andersen | Montgomery City | Samuel J. Byland | Wellsville |
| Morgan | 5 | Robert R. Lyle | Versailles | Ruth Kauffman | Versailles |
| Nodaway-Holt-Atchison-Gentry-Worth | 1 | Edward F. Bare | Tarkio | Robert E. Dunshee | Maryville |
| North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam) | 2 | Paul E. Hilton | Kirksville | Edward M. Grim | Kirksville |
| Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald) | 8 | F. B. Brown | Aurora | J. Lewis Yates | Mt. Vernon |
| Pemiscot | 10 | Jacob D. Caldwell | Hayti | James C. Strittmatter | Caruthersville |
| Perry | 10 | James F. Fairchild | Perryville | A. E. McDermott | Perryville |
| Pettis | 6 | James E. Lamy | Sedalia | A. R. Maddox | Sedalia |
| Pike | 2 | Roger F. Christensen | Louisiana | W. Joe Martin | Louisiana |
| Platte | 1 | H. Graham Parker | Platte City | H. C. Thurman | Parkville |
| St. Louis City | 3 | James M. Macnish | St. Louis | Edward D. Kinsella | St. Louis |
| St. Louis County | 4 | Edgar W. Davis | St. Louis | James R. Nakada | Clayton |
| Saline | 6 | E. Lee McCorkle | Marshall | James A. Reid | Marshall |
| Semo County Medical Society (Stoddard-New Madrid-Mississippi-Scott) | 10 | John Dernoncourt | Charleston | T. C. Buckthorpe | Sikeston |
| South Central Counties Medical Society (Howell-Oregon-Texas-Wright-Douglas-Ozark) | 9 | David G. Wilbur | Houston | Rollin H. Smith | West Plains |
| Webster | 8 | C. R. Macdonnell | Marshfield | E. G. Beers | Seymour |
| West Central Missouri Medical Society (Bates-Cass-Cedar-St. Clair-Vernon) | 6 | Donald H. Giesler | Osceola | Carter W. Luter | Butler |

# Towns, Counties and Component Societies

A

Adrian, Bates, West Central
Affton, St. Louis*
Albany, Gentry, Nodaway-Holt-Atchison-Gentry-Worth
Altenberg, Perry
Aurora, Lawrence, Ozarks
Ava, Douglas, South Central

B

Ballwin, St. Louis*
Belton, Cass, West Central
Berger, Franklin
Berkeley, St. Louis*
Bethany, Harrison, Grand River
Bloomfield, Stoddard, SEMO
Blue Springs, Jackson
Bolivar, Polk, Dallas-Hickory-Polk
Bonne Terre, St. Francois, Mineral Area
Boonville, Cooper
Bourbon, Crawford, Mid Missouri
Bowling Green, Pike
Branson, Taney, Ozarks
Braymer, Caldwell, Grand River
Brentwood, St. Louis*
Bridgeton, St. Louis*
Brookfield, Linn, Grand River
Browning, Linn, Grand River
Brunswick, Chariton
Buffalo, Dallas
Butler, Bates, West Central

C

Cabool, Texas, South Central
Cainsville, Harrison, Grand River
California, Moniteau
Camdenton, Camden
Cameron, Clinton
Campbell, Dunklin
Canton, Lewis
Cape Girardeau, Cape Girardeau
Cardwell, Dunklin
Carl Junction, Jasper
Carrollton, Carroll, Grand River
Carthage, Jasper
Caruthersville, Pemiscot
Cassville, Barry, Ozarks
Centralia, Boone
Chaffee, Scott, SEMO
Charleston, Mississippi, SEMO
Chesterfield, St. Louis*
Chillicothe, Livingston, Grand River
Clarksville, Pike
Clayton, St. Louis*
Clinton, Henry
Coatsville, Schuyler, North Central
Columbia, Boone
Concordia, Lafayette
Crane, Stone, Ozarks
Creve Coeur, St. Louis*
Crystal City, Jefferson
Cuba, Crawford, Mid Missouri

D

Desloge, St. Francois, Mineral Area
DeSoto, Jefferson
Dexter, Stoddard, SEMO
Doniphan, Ripley, Butler-Ripley-Wayne
Drexel, Cass, West Central

E

East Prairie, Mississippi, SEMO
Edgerton, Platte
Edina, Knox, North Central
Eldon, Miller
El Dorado Springs, Cedar, West Central
Elsberry, Lincoln
Eureka, St. Louis*
Everton, Jackson
Excelsior Springs, Clay

F

Farber, Audrain
Farmington, St. Francois, Mineral Area
Faucett, Buchanan
Fayette, Howard
Fenton, St. Louis*
Ferguson, St. Louis*
Festus, Jefferson
Flat River, St. Francois, Mineral Area
Florissant, St. Louis*
Forsyth, Taney, Ozarks
Fort Leonard Wood, Phelps, Mid Missouri
Fredericktown, Madison, Mineral Area
Frontenac, St. Louis*
Fulton, Callaway

G

Gallatin, Daviess, Grand River
Gashland, Clay
Gideon, New Madrid, SEMO
Glasgow, Howard
Glendale, St. Louis*
Gordonville, Cape Girardeau
Grandview, Jackson
Grant City, Worth, Nodaway-Holt-Atchison-Gentry-Worth
Gravois Mills, Jackson
Greenfield, Dade, Barton-Dade
Green Ridge, Pettis

H

Hamilton, Caldwell, Grand River
Hannibal, Marion
Harrisonville, Cass, West Central
Hartville, Wright, South Central
Hayti, Pemiscot
Herculaneum, Jefferson
Hermann, Gasconade, Franklin-Gasconade-Warren
Hickman Mills, Jackson
Higginsville, Lafayette
Hillsboro, Jefferson
Holden, Johnson
Hopkins, Nodaway
Hornersville, Dunkin
Houston, Texas, South Central
Houstonia, Pettis
Humansville, Polk, Dallas-Hickory-Polk
Hume, Bates, West Central
Huntsville, Randolph, Chariton-Macon-Monroe-Randolph

I

Illmo, Cape Girardeau
Independence, Jackson
Ironton, Iron, Mineral Area

J

Jackson, Cape Girardeau
Jefferson Barracks, St. Louis*
Jefferson City, Cole
Jennings, St. Louis*
Joplin, Jasper

K

Kahoka, Clark, Lewis-Clark-Scotland
Kansas City, Jackson
Kennett, Dunklin
Keytesville, Chariton
Kimmswick, Jefferson
King City, Gentry, Nodaway-Holt-Atchison-Gentry-Worth
Kirksville, Adair, North Central
Kirkwood, St. Louis*
Knobnoster, Johnson
Koch, St. Louis*

L

Ladue, St. Louis*
La Grange, Lewis
Lakeview Heights, Benton
Lamar, Barton
La Monte, Pettis
Leadwood, St. Francois, Mineral Area
Leasburg, Crawford, Mid Missouri
Lebanon, Laclede, Mid Missouri
Lee's Summit, Jackson
Leeton, Johnson
Lemay, St. Louis*
Lexington, Lafayette
Liberty, Clay
Licking, Texas, South Central
Lockwood, Dade, Barton-Dade
Louisiana, Pike

M

Macon, Macon, Chariton-Macon-Monroe-Randolph
Malden, Dunklin
Maplewood, St. Louis*
Marceline, Linn, Grand River
Marshall, Saline
Marshfield, Webster
Marthasville, Warren, Franklin-Gasconade-Warren
Martin City, Jackson
Maryville, Nodaway
Maysville, De Kalb, Grand River
Mexico, Audrain
Miami, Saline
Milan, Sullivan, North Central
Miller, Lawrence, Ozarks
Moberly, Randolph, Chariton-Macon-Monroe-Randolph
Monett, Barry, Ozarks
Montgomery City, Montgomery
Morehouse, New Madrid, SEMO
Morrisville, Polk, Dallas-Hickory-Polk
Mound City, Holt, Nodaway-Holt-Atchison-Gentry-Worth
Mountain Grove, Wright, South Central
Mountain View, Howell, South Central
Mount Vernon, Lawrence, Ozarks

N

Neosho, Newton, Ozarks
Nevada, Vernon, West Central
New Bloomfield, Callaway
New Florence, Montgomery
New Haven, Franklin
New Madrid, New Madrid, SEMO
Nixa, Christian, Ozarks
Noel, McDonald, Ozarks
Norborne, Carroll, Grand River
Normandy, St. Louis*
North Kansas City, Clay

O

Oak Grove, Jackson
Odessa, Lafayette
O'Fallon, St. Charles, Lincoln-St. Charles
Olivette, St. Louis*
Oran, Scott
Osceola, St. Clair, West Central
Overland, St. Louis*
Owensville, Gasconade, Franklin-Gasconade-Warren
Ozark, Christian, Ozarks

P

Pacific, Franklin
Palmyra, Marion
Paris, Monroe, Chariton-Macon-Monroe-Randolph
Parkville, Platte
Parma, New Madrid, SEMO
Pattonsburg, Daviess, Grand River
Pattonville, St. Louis*
Perryville, Perry
Piedmont, Wayne, Butler-Ripley-Wayne
Pilot Grove, Cooper
Pine Lawn, St. Louis*
Platte City, Platte
Plattsburg, Clinton
Pleasant Hill, Cass, West Central
Poplar Bluff, Butler
Portageville, New Madrid, SEMO
Potosi, Washington, Mineral Area
Princeton, Mercer, Grand River

R

Raytown, Jackson
Reeds, Jasper
Reeds Spring, Stone, Ozarks
Republic, Greene
Rich Hill, Bates, West Central
Richmond, Ray, Lafayette-Ray
Richmond Heights, St. Louis*
Ridgeway, Harrison, Grand River
Robertson, St. Louis*
Rock Hill, St. Louis*
Rockport, Atchison, Nodaway-Holt-Atchison-Gentry-Worth
Rolla, Phelps, Mid Missouri
Rosendale, Andrew

S

St. Ann, St. Louis*
St. Charles, St. Charles, Lincoln-St. Charles
St. Clair, Franklin
Ste. Genevieve, Ste. Genevieve, Mineral Area
St. James, Phelps, Mid Missouri
St. Joseph, Buchanan
St. Louis City*

Salem, Dent, Mid Missouri
Salisbury, Chariton
Sappington, St. Louis*
Savannah, Andrew
Sedalia, Pettis
Sedgewickville, Bollinger
Senath, Dunklin
Seymour, Webster
Shelbina, Shelby, Marion-Ralls-Shelby
Shelbyville, Shelby, Marion-Ralls-Shelby
Shrewbury, St. Louis*
Sikeston, Scott, SEMO
Silex, Lincoln
Slater, Saline
Smithton, Pettis
Smithville, Clay
Springfield, Greene
Stanberry, Gentry, Nodaway-Holt-Atchison-Gentry-Worth
Steele, Pemiscot
Steelville, Crawford, Mid Missouri
Stockton, Cedar, West Central
Stafford, Greene
Strasburg, Cass, West Central
Sullivan, Franklin
Sweet Springs, Saline

**T**

Tarkio, Atchison, Nodaway-Holt-Atchison-Gentry-Worth
Thayer, Oregon, South Central
Tipton, Moniteau
Trenton, Grundy, Grand River
Troy, Lincoln

**U**

Union, Franklin
Unionville, Putnam, North Central
University City, St. Louis*

**V**

Valley Park, St. Louis*
Vandalia, Audrain
Versailles, Morgan

**W**

Walnut Grove, Greene
Wardell, Pemiscot
Warrensburg, Johnson
Warrenton, Warren, Franklin-Gasconade-Warren
Warsaw, Benton
Washington, Franklin
Waverly, Lafayette
Waynesville, Pulaski, Mid Missouri
Webb City, Jasper
Webster Groves, St. Louis*
Wellsville, Montgomery
Wentzville, St. Charles, Lincoln-St. Charles
Weston, Platte
West Plains, Howell, South Central
Willow Springs, Howell, South Central
Windsor, Henry
Winona, Shannon, Carter-Shannon
Winston, Daviess, Grand River

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* Member may belong to St. Louis County Medical Society or St. Louis Medical Society.

# Alphabetical List of Members

A

Aaron, George A., Independence
Abel, Oliver III, St. Louis
Abele, William A., Boonville
Abell, Walter E., St. Louis
Abrams, Morris, St. Louis
Acker, Harry L., St. Louis
Ackerman, Lauren V., St. Louis
Adams, Howard D., Liberty
Adams, James T., Fort Leonard Wood
(Member St. Louis Medical Society)
Adelman, Arthur, Kansas City
Adler, Benard C., University City
Agee, Loren G., Hickman Mills
Agress, Harry, St. Louis
Ahern, Archibald M., St. Louis
Ahlefeld, Charles B., Kansas City
Ahlering, George H., St. Louis
Ahlvin, Robert C., St. Louis
Aiken, George A., Marshall
Aiken, Richard F., Marshall
Aisenstadt, E. Albert, Kansas City
Aitken, Louis F., St. Louis
Alberg, Marvin R., Parkville
Alberts, Phillip S., Portland, Ore.
(Member Jackson County Medical Society)
Albrecht, Franklin H., St. Louis
Alden, Arthur M., St. Louis
Aldrich, James T., St. Louis
Alex, Morris, St. Louis
Alexander, Harry L., St. Louis
Allain, James J., St. Joseph
Allaman, John M., Sarasota, Fla.
(Member Buchanan County Medical Society)
Allan, James R., Excelsior Springs
Allbee, Roger H., Crystal City
Allebach, Hobart K., Kansas City
Allen, Charles H., Kansas City
Allen, Claude J., Rich Hill
Allen, David O., Joplin
Allen, Erroll W., Carrollton
Allen, Henry C., Clayton
Allen, Hollis N., St. Louis
Allen, Horace E., Columbia
Allen, James H., St. Louis
Allen, Jerry H., Springfield
Allen, Joseph E., Columbia
Allen, Melvin A., St. Louis
Allen, Robert E., Kansas City
Allen, S. Lloyd, Parkville
Allen, Willard M., St. Louis
Allen, William B., Kansas City
Allen, William C., Columbia
Allen, William E., Jr., St. Louis
Allen, William H., Nevada
Allison, James B., Springfield
Almond, Carl H., Columbia
Alsop, Webb S. Jr., Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Alsup, Frederick F., Kalispell, Mont.
(Member Ozarks Medical Society)
Althaus, Carl J., St. Louis
Altheide, Harvey E., Ladue
Altheide, J. Paul, St. Louis
Altomare, Edward P., Kansas City
Altringer, Arthur N., Kansas City
Alvis, Bennett Y., St. Louis
Alvis, Edmund B., St. Louis
Ames, Mary B., St. Joseph
Ames, William H., St. Joseph
Anast, Constantine S., Columbia
Andersen, E. J. T., Montgomery City
Anderson, Paul B., Neosho
Anderson, Raymond B., Kansas City
Anderson, Richard W., Kansas City
Andrae, Robert L., Louisiana
Andreassen, Dimil F., Rolla
Andrews, Berneil W., Kansas City
Andrus, Bailey C., Kansas City
Anstey, George, St. Louis
Anthony, Dallas, Springfield
Apicella, Frank V., St. Louis
Appleberry, Charles H., Rivermines
Appleby, Douglas C., St. Louis
Appleford, G. Burton, Prairie Village, Kans.
(Member Jackson County Medical Society)
Aquino, Philip J., Caruthersville
Archer, Perry C., Shelbyville
Arms, Arnold V., Kansas City
Arneson, Axel N., St. Louis
Arney, William G., St. Louis
Arnold, Eugene L., St. Louis
(Member Chariton-Macon-Monroe-Randolph County Medical Society)
Arnold, Herbert M., Lamar
Aronberg, Lawrence M., St. Louis
Arst, Herbert E., Kansas City
Artz, Franz, Fort Lauderdale, Fla.
(Member St. Louis Medical Society)
Aschman, Theodore H., Kansas City
Asel, Norman D., Columbia
Ash, Charles J., Springfield
Asher, A. Graham, Kansas City
Ashley, Hugh V., Cape Girardeau
Ashley, Hugh Jr., Cape Girardeau
Ashley, Thomas F., Springfield
Atcheson, Bellefield, Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Atkinson, Thomas E. Jr., Springfield
Atwell, Floyd C., Kansas City
Aubin, Francis W., Branson
Auer, Arthur I., St. Louis
AufderHeide, G. Russell, St. Louis
Augustine, Robert W., St. Joseph
Aull, John, Kansas City
Auner, Cecil R., Springfield
Austin, Martin G., Webster Groves
Avery, Willard B., Boonville
Aylward, Howard J., St. Louis
Azarnoff, Daniel L., St. Louis
Azuma, Nobutaka, St. Louis
Azzouni, J. N., St. Louis

B

Bach, Lysle M., Hannibal
Bachmann, Paul L., Independence
Backer, Matthias H. Jr., St. Louis
Backlar, Joseph, Beverly Hills, Calif.
(Member St. Louis County Medical Society)
Baer, Alvin J., Kansas City
Bagby, James W., Clayton
Baggot, Michael C., Granite City, Ill.
(Member St. Louis Medical Society)
Bahn, Charles F., Cape Girardeau
Bailey, Alan H., Mount Vernon
Bailey, Drennan, St. Louis
Bailey, Frank A., St. Louis
Bailey, Fred W., St. Petersburg, Fla.
(Member St. Louis Medical Society)
Bailey, William H., St. Louis
Baird, J. Edward, Excelsior Springs
Baker, James M., Columbia
Baker, Josephine D., Moberly
Baker, Philip J., Kansas City
Baker, Robert E., St. Louis
Baker, Warren C., Savannah
Balazs, Karl J., St. Louis
Baldwin, Paul, Kennett
Baldwin, Richard, Springfield
Bales, Eugene L., Carrollton
Ball, James E., Kansas City
Ballard, V. Bryce, Kansas City
Bandle, Donald F., St. Louis
Banet, Samuel R., St. Louis
Banton, William C., St. Louis
Barber, John J., Corrigan, Tex.
(Member Greene County Medical Society)
Barbour, Marvin R., Poplar Bluff
Barden, Frank W., Creve Coeur
Bardenheier, J. Phil, St. Louis
Bare, Chester I. Jr., Raytown
Bare, Edward F., Tarkio
Bareis, Robert J., Marshfield
Barelli, Pat A., Kansas City
Barger, O. B., Harrisonville
Barker, Jesse W., St. Louis
Barnard, John L. Jr., Kansas City
Barnes, Robert H., Kansas City
Barnes, Seth S., Cape Girardeau
Barnett, Charles H., Bolivar
Barnett, Floyd A., Paris
Barnett, Gordon P., Kansas City
Barnett, Julian H., St. Louis
Barnett, Norman H., Joplin
Barone, Paul L., Nevada
Barrett, Scott R., St. Louis
Barrow, Jack, St. Louis
Barry, Gerald W., Kansas City
Barry, John W., Kansas City
Barry, William B., Kansas City
Bartels, Leo G., St. Louis
Bartlett, Robert W., St. Louis
Bartlett, Willard Jr., Clayton
Bartnick, Mitchel L., St. Louis
Bascom, Charles H., St. Joseph
Baska, R. E., Butler
Bass, Billy J., Salem
Bassett, Robert B., St. Louis
Bates, George C., Kansas City
(Member Clay County Medical Society)
Battersby, Richard S., Columbia
Bauer, John D., St. Louis
Bauer, Joseph A., St. Louis
Bauer, Maria, Granite City, Ill.
(Member St. Louis Medical Society)
Bauer, Otto, Granite City, Ill.
(Member St. Louis Medical Society)
Bauer, Robert A., St. Louis
Baum, Frank E., Kansas City
Bauman, Henry C., Maryville
Baumann, A. R., Steelville
Baumgarten, Walter Jr., St. Louis
Baumhardt, Edward E., Kansas City
Bawell, Malcolm B., St. Louis
Bay, Merrill R., Blue Springs
Beal, Homer, Malden
Beam, Sim F., St. Louis
Beare, J. Byron, St. Louis
Beare, Lucia V., St. Louis
Beasley, L. Kenneth, St. Louis
Beck, Paul M., St. Joseph
Becke, William G., St. Louis
Beckemeyer, W. Albert, Sedalia
Becker, Bernard, St. Louis
Becker, Edward J., St. Louis
Becker, George H., St. Louis
Becker, Richard R., Kansas City
Becker, Rolfe A., Kansas City
Becker, Stanley C., St. Louis
Beckett, Theodore C., Boonville
Beckette, Edmund S., St. Louis
Beckman, Donald E., St. Louis
Beckman, William, Strasburg
Bee, James E., Kansas City
Beecher, Sheldon B., Poplar Bluff
Beers, Ellsworth G., Seymour
Behrens, Donald T., Richmond Heights
Behrens, Gerald L., St. Louis
Belden, Edgar A., Jefferson City
Belew, Joe E., New York, N. Y.
(Member St. Louis Medical Society)
Belinson, Louis, Jefferson City
Bell, Robert M., St. Louis
Bell, William F., Lee's Summit
Belot, Monti L., Parkville
Belsey, Wallace A., Campbell
Bender, Ralph H., St. Louis
Benincasa, Anthony V., St. Louis
Benjamin, Durand, St. Louis
Bennett, James D., Kansas City
Bennett, Thomas T., St. Louis
Benoit, Hector W. Jr., Kansas City
Benson, Leo J. Jr., Kennett
Benson, Scott C., St. Joseph
Berard, Louis N., St. Louis
Berenson, Sheldon E., Kansas City
Berg, Leonard, St. Louis
Berg, Ralph, St. Louis
Berger, Edward J., St. Louis
Bergman, Hugo F., St. Louis
Bergmann, John F., St. Louis
Bergmann, Martin, St. Louis
Bergmann, Victor H., Kansas City
Bergner, Grace E., St. Louis
Berland, Harry I., St. Louis
Berman, Joseph P., St. Louis
Berman, William, St. Louis
Bernard, Harvey R., St. Louis
Berndsen, Gerard H., St. Louis
Berney, Francis J., St. Joseph
Bernreiter, Michael, Kansas City
Bernstein, Aaron M., St. Louis
Bernstorff, Paul H., St. Louis
Berry, Guy N., Kansas City
Berry, John W., Clayton
Berry, Maxwell G., Kansas City
Berry, Paul T., Troy
Bersche, Bertram L., St. Louis
Berwald, Irwin I., St. Louis
Bess, William E., Sedalia
Best, Robert, Higginsville
Bettonville, Paul J. Jr., St. Louis
Bickel, Vern T., Lamar
Biggs, Fred J. Jr., Poplar Bluff
Biggs, Harry L., Kansas City
Biggs, James B., Bowling Green
Bikales, Victor W., Kansas City
Bills, Marvin L., Kansas City
Bilsky, Nathan, St. Louis
Bindbeutel, Arthur H., St. Louis
Bindbeutel, Donald A., Webster Groves
Binder. Morton A., St. Louis

Bircher, John L., St. Louis
Birdsall, Thomas C., St. Louis
Birenbaum, Aaron, St. Louis
Birney, William P., Hannibal
Birsner, Frank H., Carthage
Birsner, Louis J., St. Louis
Bishop, Marion D., Florissant
Bishop, Mary M., Ferguson
Bisno, Daniel, St. Louis
Blache, J. Owen, St. Louis
Black, Don A., Kansas City
Black, Eugene C., Kansas City
Black, James M., Carrollton, Ill. (Member St. Louis County Medical Society)
Black, Samuel P. W., Columbia
Blacklock, David E., King City
Blackman, Nathan, Kirkwood
Blackmore, Thomas A., Windsor
Blair, Vilray P. Jr., St. Louis
Blalock, Robert W., Marshall
Blalock, William N., St. Louis
Blanke, Otto T., Joplin
Blankenship, Dale M., Cape Girardeau
Blankenship, George W., Neosho
Blanton, J. C., Sikeston
Bleyer, Adrien S., St. Louis
Blim, Richard D., Kansas City
Block, Arnold S., St. Louis
Bloom, W. A., Fayette
Bock, Lux H., St. Louis
Bockelman, Clifford H., Brentwood
Boedeker, Roy V., St. Louis
Boemer, Lilburn C., St. Louis
Boger, James W., Sedalia
Boggs, Roy E., St. Louis
Bohne, William R., St. Louis
Bohnsack, Ralph W., Brookfield
Bohrer, Harry C., St. Louis
Boldizar, Albert G., St. Louis
Boldt, Thomas H., St. Louis
Boles, Clifford R., Clayton
Boley, James O., Kansas City (Member Cooper County Medical Society)
Bolgar, Bertalan, Festus
Bolin, N. Venay, Shawnee Mission, Kans. (Member Jackson County Medical Society)
Bolinske, Robert E., Clayton
Bolton, Robert L., Larson AFB, Wash. (Member St. Louis Medical Society)
Bond, Leslie F., St. Louis
Bondurant, Bryce H., St. Louis
Bonebrake, MacDonald, Springfield
Bonfanti, Albert L., St. Louis
Bonney, Samuel C., Washington
Boody, Robert J., Kansas City
Boone, Daniel S., Kansas City (Member Clay County Medical Society)
Boone, Richard F., Macclenny, Fla. (Member Butler-Wayne-Ripley County Medical Society)
Booth, Herbert R., Hamilton
Bordy, Marvin D., Kansas City
Borenstine, Joseph, Kansas City
Bortnick, Arthur R., St. Louis
Boswell, John R., St. Louis
Boteler, George M., St. Joseph
Boughnou, Harvey P., Kansas City
Bourke, Timothy S., Kansas City
Boutros, Amin, Kansas City
Bowdern, Edward H., St. Louis
Bowdish, Palmer R., Marshall
Bowe, Edwin E., Jefferson City
Bowerman, Harold H., St. Louis
Bowersox, Warren A., St. Louis
Bowles, G. Robert, St. Louis
Bowles, Richard P., Liberty
Bowman, Melvin C., Neosho
Bowser, John F., Kansas City
Box, Earnest M., Springfield
Boyd, Arthur M., St. Louis
Boyd, George K., Kansas City
Boydston, Catherine, Odessa
Boydston, W. Wayne, Odessa
Bozzo, Raymond J., Washington
Bradford, John F., Kansas City
Bradley, Frank R., St. Louis
Bradley, Richard V., Clayton
Bradley, William W., Farber
Bradshaw, W. D., Clinton
Brady, Charles H., Sedalia
Brady, Hugh S., Concordia
Brams, Jack B., Kansas City
Brand, Earl L., Webster Groves
Brandon, Walter L., Poplar Bluff
Brasher, Ben H., Lexington
Brasher, Charles A., Mount Vernon
Braufman, Harvey S., St. Louis
Braverman, Abe E., Kansas City
Brazos, John C., Smithton
Bremser, Harry L., St. Louis
Brennan, George A., St. Louis
Brennan, John A., Farmington
Brennan, Patricia A., St. Louis
Brennan, Raymond J., Chillicothe
Brennan, Robert A., St. Louis
Brennan, Robert V., Kirkwood
Brenner, Paul A., Owensville
Brereton, Robert L., Kirkwood
Brewer, Lake, Ridgeway
Brewster, Charlotte M., Kansas City
Bricker, Eugene M., St. Louis
Bridgens, James G., Independence
Bridges, James R., Kahoka
Briscoe, John R., Maplewood
Bristow, Robert B., St. Joseph
Brittingham, Thomas E., St. Louis
Brodeur, Armand E., Kirkwood
Bronson, Shael S., St. Louis
Brooke, Clement E., Columbia
Brookes, Henry S. Jr., St. Louis
Brookes, Robert D., St. Louis
Brookreson, Alton F., Poplar Bluff
Brooks, Arthur C., St. Louis
Brooks, John M., Springfield (Member Dallas-Hickory-Polk County Medical Society)
Brother, George M., St. Louis
Broun, Goronwy O., St. Louis
Broun, Goronwy O. Jr., St. Louis
Brown, Adrian J., Kansas City
Brown, Alex L., Springfield
Brown, Daniel W., San Diego, Calif. (Member St. Louis Medical Society)
Brown, E. Eugene, St. Louis
Brown, Eugene R., University City
Brown, Frederick B., Aurora
Brown, Irwin S., Kansas City
Brown, James B., St. Louis
Brown, James L., St. Louis
Brown, James T., Springfield
Brown, John J., Fulton
Brown, Lyman D., Springfield
Brown, Robert S., Kansas City
Brown, Seymour, St. Louis
Brown, William S., St. Louis
Brownfield, Samuel T., Brookfield
Brownsberger, Robert H., Appleton City
Broyles, Glen H., Kansas City
Broyles, Watkins A., Bethany
Bruce, Helen L., St. Louis
Bruce, James G., Jefferson City
Bruce, Leo A., Sikeston
Bruce, Paul C., Excelsior Springs
Brukardt, Diane, Columbia
Brumm, Lawrence W., Kansas City
Bruner, Claude R., Columbia
Bruner, Robert E., Kansas City
Bruns, Kenneth, University City
Brust, Carl H., Mission, Kans. (Member Jackson County Medical Society)
Bryan, James H., Clayton
Bryan, William H. Jr., Kansas City
Bryan, William T. K., St. Louis
Bryant, William O., Hayti
Buckingham, William, Kansas City
Buckner, Robert C., Kansas City
Buckthorpe, Thelma C., Sikeston
Budd, John J. Jr., St. Louis
Buddrus, David J., Kansas City
Budke, Harold A., Kansas City
Buehler, Carl T. Jr., Eldon
Buesseler, John A., Columbia
Bugg, Andrew F., Lordsburg, N. M. (Member Mineral Area County Medical Society)
Buhler, Victor B., Kansas City
Buie, Bruce R., Kansas City
Bulger, Harold A., St. Louis
Bull, Ben M., Ironton
Bumgarner, James E., Columbia
Bumgarner, Roger W., Columbia
Bunting, Williston P., Kansas City
Burch, John E., Joplin
Burcham, Tom R. Jr., Doniphan
Burford, Cyrus E., St. Louis
Burford, E. Humber, St. Louis
Burford, Thomas H., St. Louis
Burke, Robert J., St. Louis
Burkey, Jordan W., Springfield
Burkhardt, Edward F., St. Louis
Burmeister, R. William, St. Louis
Burney, Wallace S., Miller
Burns, Beryl I., Columbia
Burns, Francis J., St. Louis
Burns, Francis R., Hannibal
Burns, Robert R., Dallas, Tex. (Member Jackson County Medical Society)
Burns, Thomas J., Houston
Burns, Thomas W., Columbia
Burnside, Charles R., Kirkwood
Burst, Donald O., St. Louis
Burstein, Robert, St. Louis
Busch, Anthony K., St. Louis
Busiek, Erwin F., Springfield
Busiek, Paul J., Springfield
Busiek, Urban J., Springfield
Bussmann, Donald W., St. Louis
Butcher, Harvey R. Jr., St. Louis
Butcher, Robert W., Kansas City
Butler, E. F., St. Joseph
Butterworth, Nelson S., Kansas City
Butts, James D., Rolla
Byars, Louis T., St. Louis
Byers, Philip L., Kansas City
Byland, Benjamin F., Maryville
Byland, Samuel J., Wellsville
Byrne, John E., St. Louis

C

Caciolo, Carlo, St. Louis
Cacioppo, Joseph E., St. Louis
Cadice, John B., St. Louis
Caffrey, Raymond J., Kansas City
Cain, Alvin R., Lamar
Cain, Charles F., Caruthersville
Caldwell, Fred, Poplar Bluff
Caldwell, Jacob D., Hayti
Caldwell, John K., Kansas City
Calise, Peter J., Columbia
Calkins, Delevan, St. Louis
Callahan, Donald E., Jennings
Callahan, Joseph D., St. Louis
Callaway, Guy D., Springfield
Callaway, Guy D. Jr., Springfield
Callaway, Luther M., Kansas City
Callihan, Charles F., West Plains
Calman, Carl H., St. Louis
Calodney, Martin M., St. Louis
Calovich, Emery R., Kansas City
Calvert, Lewis C., Weston
Camel, H. Marvin, St. Louis
Campbell, A. J., Sedalia
Campbell, Cecil S., St. Louis
Campbell, Edward D., Cape Girardeau
Campbell, Frederick B., Kansas City
Campbell, James E., Macon
Campbell, John G., Kansas City
Campos, Francisco J., St. Louis
Canella, John M., Hannibal
Canepa, John B., St. Louis
Canlas, Emilio M., Poplar Bluff
Cannon, Edward M., St. Louis
Cannon, W. Joseph, St. Louis
Canty, Eugene J., St. Charles
Capetti, Alex P., Crane
Cappel, Powel B., St. Louis
Capps, Eugene C., Columbia
Caravelli, Anthony F., St. Louis
Carbaugh, Glenn C., Kansas City
Carleton, Charles E. Jr., Farmington
Carlin, Albert L., Stanberry
Carlin, M. Richard, St. Louis
Carlisle, John B., Sedalia
Carlson, Arne E., St. John's
Carlson, Hjalmar E., Kansas City
Carmichael, Francis A. Jr., Kansas City
Carney, Joseph E. Jr., St. Louis
Carney, Roscoe P., St. Louis
Carpenter, George T., St. Joseph
Carpenter, George W., Chillicothe
Carpenter, Wallace, Rockport
Carr, Archie D., St. Louis
Carr, G. Thomas, St. Louis
Carrier, Edson C., Kansas City
Carrier, John A., St. Louis
Carrington, Howard W., Lebanon
Carroll, George A., St. Louis
Carroll, Grayson, St. Louis
Carroll, Percy J., Clayton
Carroll, Thomas W., Lamar
Carron, Joseph F., Festus
Carron, Oscar A., Perryville
Carter, Edwin E., St. Louis
Carter, Howard, Hamilton
Carter, James R., Neosho
Carter, John F., St. Louis
Caruso, Alfred A., Kansas City
Casady, Gilbert N., Prairie Village, Kans. (Member Jackson County Medical Society)
Casebolt, Buford T., Kansas City
Casebolt, John M., Kansas City
Casebolt, Milton B., Kansas City
Casey, Shederic A., Lebanon
Casford, Ralph S., Kansas City
Cash, Charles R., Kennett
Cason, Elbert H., St. Louis
Cassel, Melvin A., St. Louis
Castelaw, Rush E., Kansas City
Catanzaro, Anthony F., St. Louis

Catanzaro, Francis J., St. Louis
Catanzaro, Rudolph E., St. Louis
Cavaness, Ernest W., Leucadia, Calif. (Member Jackson County Medical Society)
Centner, Paul J., Kansas City
Chalkley, Judson I., Columbia
Chamberlain, Gilbert L., Boonville
Chambers, James Q. Jr., Kansas City
Chamness, James T., St. Louis
Chandler, Robert A., Kansas City
Chapman, Arthur H., Kansas City
Chapman, Jean A., Cape Girardeau
Chapman, Jerry R., Steele
Chapman, Samuel B., Kansas City
Charles, Benjamin H., St. Louis
Charles, Cecil M., Clayton
Charnas, Raymond M., St. Louis
Chastain, Charles W., Farmington
Chastain, Maurice W., N. Kansas City
Cheng, Alfred K., San Francisco, Calif. (Member Jackson County Medical Society)
Cherre, Anthony J., St. Louis
Cherre, Charles J., St. Louis
Chesney, George W., Joplin
Chiarottino, Joseph F., St. Joseph
Chiasson, E. Chaille, Columbia
Chieffi, Margaret, St. Louis
Chiles, David R., Smithville
Chinsky, Murray, St. Louis
Christ, Martin H., St. Joseph
Christensen, Roger F., Louisiana
Christy, Raymond A., Springfield
Chute, W. Deward, Moberly
Ciampa, Thomas, St. Louis
Ciapciak, Stanley J., St. Louis
Cibis, Paul A., St. Louis
Clancy, James F., St. Louis
Clark, Chester L., Trenton
Clark, Clarence L., St. Louis
Clark, Harold B., Kansas City
Clark, Irving H., Hickman Mills
Clark, James F., St. Louis
Clark, Kendall A., Jefferson City
Clarke, Michael J., Springfield
Clary, William F., Springfield
Clasen, Arthur C., Miami Beach, Fla. (Member Jackson County Medical Society)
Clawson, James W., Springfield
Clay, Hampson S., Poplar Bluff
Clayton, Edgar L., Springfield
Cleary, Frank, St. Louis
Cleveland, Horace F., Long Beach, Calif. (Member St. Louis Medical Society)
Cline, Harold H., Piedmont
Cline, Merle A., Kansas City
Clisham, John F., Hannibal
Clithero, William H., Duarte, Calif. (Member St. Louis Medical Society)
Coates, Thomas A., St. Louis
Coburn, Donald F., Kansas City
Cochran, Donald Q., Columbia
Cochran, Jo R., Cape Girardeau
Cochran, Thomas E. Jr., Springfield
Cochrane, Joseph J., Kansas City
Cockerell, Sanford F., Independence
Coffee, Amos L., Willow Springs
Coffey, Ralph R., Kansas City
Coffin, Ernest L., Lakeworth, Fla. (Member St. Louis Medical Society)
Coffin, Theodore A., Kansas City
Coffman, Esther E. L., Lakeworth, Fla. (Member Ozark Medical Society)
Cohen, Benjamin H., Clayton
Cohen, Frank, St. Ann
Cohen, Harry K., Kansas City
Cohen, Hilliard, Kansas City
Cohen, Louis, St. Louis
Cohle, Richard R., Carthage
Cohnberg, Rosellen E., Monett
Cohrs, Clarence C., Moberly
Coil, Paul E., Mexico
Colbert, James W. Jr., St. Louis
Coldwater, Kenneth B., St. Louis
Cole, William R., St. Louis
Coleman, William G., St. Louis
Colglazier, Mary C., Kansas City
Coller, Frederick B., Springfield
Collins, Gretchen D., Macon
Collins, John M., St. Louis
Collodi, George A., Brentwood
Colom, George A., Kansas City
Combs, Joe D., Nevada
Comeau, Richard A., Dexter
Comens, Phillip, St. Louis
Comens, Ruth C., St. Louis
Commerford, James J., Crystal City
Commerford, John F., St. Charles
Compton, James R., Whittier, Calif. (Member St. Louis County Medical Society)
Cone, Alfred J., Chesterfield
Connell, Evan S., Kansas City
Conover, Charles C., Shawnee Mission, Kans. (Member Jackson County Medical Society)
Conrad, Adolph H. Jr., St. Louis
Conrad, Joseph A., Chillicothe
Conrad, Marshall B., Clayton
Conrad, Raymond C., Springfield
Cook, Jerome E., St. Louis
Cook, Ralph L., St. Louis
Cook, Oliver W., Caruthersville
Cook, Thomas B., Richmond
Cooper, Charles S., Kansas City
Cooper, Claude W., Thayer
Cooper, Henry T., St. Louis
Cooper, John H., Kansas City
Cooper, Lawrence E., Ft. Myers, Fla. (Member Pemiscot County Medical Society)
Cooper, Leo F., Shawnee Mission, Kans. (Member Jackson County Medical Society)
Cooper, Maurice E., Columbia
Cooper, R. Lee, Warrensburg
Cooper, Theodore, St. Louis
Cooper, Thomas J., St. Louis
Cope, James C., Columbia
Cope, Joseph S., Lexington
Copher, Glover H., St. Louis
Copp, Ralph Jr., St. Louis
Cordonnier, Justin, St. Louis
Correnti, Nicholas A., St. Louis
Cortner, Mary C., Kansas City
Cossins, Carlos E., St. Joseph (Member Nodaway-Holt-Atchison-Gentry-Worth Counties Medical Society)
Costa, Dominic V., St. Louis
Costello, Cyril J., St. Louis
Costello, Joseph P., St. Louis
Costello, Joseph P. Jr., Brentwood
Costen, James B., St. Louis
Costen, William S., St. Louis
Costrino, John J., University City
Costrino, Joseph A., St. Louis
Coughlin, Bertrand D., St. Louis
Counsell, Chester M., Kansas City
Cowan, Robert D., Aurora
Cowan, Watt O., Greenfield
Cowdry, Edmund V. Jr., St. Louis
Cowherd, Joseph B., Kansas City
Cox, Kenneth E., Kansas City
Cox, Mary E., St. Louis
Cox, William A., Jefferson City
Cox, William L., Liberty
Coxe, William S., St. Louis
Craig, Irwin T., Joplin
Craig, Owen W. D., St. Joseph
Craig, Richard O., St. Joseph (Member St. Louis Medical Society)
Cramb, Arthur B., Lakeland, Fla. (Member North Central Counties Medical Society)
Crawford, Archie L., Joplin
Crawford, Katherine J., University City
Crawford, Oral B., Springfield
Crawford, Robert M., Sullivan
Creech, Joseph C., Troy
Crego, Clarence H. Jr., St. Louis
Cremer, William J., Fulton
Cresswell, George F., Potosi
Crews, Robert N., Fulton
Crider, Russell J., St. Charles
Criscione, James R., St. Louis
Crispell, Lawrence S., Joplin
Critchlow, William C., Sikeston
Crites, Edward, Sedgewickville
Crocker, Albert M., Kansas City
Croom, Dorwyn W., Malden
Crosby, Alice S., Salem
Crossman, Robert W., Webster Groves
Crouch, F. Richard, Farmington
Crowe, John T., Cape Girardeau
Crowell, Hugh C., St. Louis
Crozier, Franklin A., Richmond
Cruvant, Bernard A., St. Louis
Culbertson, William F., Kansas City
Cullers, Charles H., Trenton
Cullum, Albert G. J., Middlesboro, Ky. (Member St. Louis County Medical Society)
Cummings, James H., St. Louis
Cunningham, Darral D., Springfield
Curl, Howard, Joplin
Curran, Desmond, Kansas City
Curran, George L., St. Louis
Curts, Calvin J., Kansas City
Cutcliff, Daniel J., Kansas City
Cutler, Harold M., St. Louis
Cutler, Harry, St. Louis
Cutter, Edgar B., San Francisco, Calif. (Member St. Louis Medical Society)
Czebrinski, Edward W., St. Louis

### D

Daake, John W., St. Louis
Dabbs, LeRoy, St. Louis
Dahms, Gustave, St. Louis
Daley, Frank R., Hamilton
Dalton, Arthur R., St. Louis
Dalton, Timothy T., Kansas City
Daman, George A., St. Louis
Dames, Richard J., St. Louis
Damron, Edward O., Elsberry
Damron, Oscar H., Warrensburg
Danis, Peter G., St. Louis
Dankner, Arnold, Clayton
Dann, David S., Kansas City
Darnell, Thomas F. B., Columbia
Daughaday, William H., St. Louis
Daum, Harold F., Sedalia
Davault, George K., Richmond
Davidson, John D., St. Louis
Davidson, Morris, St. Louis
Davie, Joseph, St. Louis
Davis, C. Braxton, Nevada
Davis, Edgar W., St. Louis
Davis, Frank L., St. Louis
Davis, Herbert V., Kansas City
Davis, Irl R., St. Louis
Davis, Jack M., Kansas City
Davis, John J., Overland Park, Kans. (Member Jackson County Medical Society)
Davis, Kenneth A., Kansas City
Davis, Landis Y., Canton
Davis, Leonard L. Jr., Mexico
Davis, Martin W., St. Louis
Davis, Myron W., St. Louis
Davis, Paul C., McLaud, Okla. (Member Ozarks Medical Society)
Davis, Robert C., Kansas City
Davis, Wilbur L., Charleston
Day, Anthony B., Marshall
Day, Cameron B., Kansas City
Day, Maxwell, St. Joseph
Deakin, Rogers, St. Louis
Dean, Francis D., Fayette
Dean, Lee W. Jr., Clayton
Decker, Albert I., Shawnee Mission, Kans. (Member Jackson County Medical Society)
DeGenova, Gerald H., Ste. Genevieve
DeHovitz, Bernard, St. Louis
Deitchman, Robert B., St. Louis
de la Torre, John J., Sullivan
Delzell, William A., Springfield
DeMaria, Peter F., Kansas City
Demko, Frank, St. Louis
Demko, William, St. Louis
DeMott, John D., Kansas City
DeMotte, John A., Kansas City
Dempsey, David T., Kennett
Denk, Alan F., Brentwood
Denney, Richard W., Mountain Grove
Dennie, Charles C., Kansas City
Denninghoff, James C., Columbia
Dennis, W. Paul, Flat River
Denny, Hubert M., Union
Denton, Levi D., Hayti
DePew, Heber B., St. Louis
Dernoncourt, John E., Charleston
DeTar, Burleigh E., Joplin
DeTar, B. E. Jr., Joplin
Deutch, Max, St. Louis
Devine, John B., St. Louis
Devine, Joyce E., Boston, Mass. (Member St. Louis Medical Society)
Dewald, Paul A., St. Louis
Deweese, Everett R., Kansas City
Dewein, Edward G., Rock Hill
Dexheimer, Frank R., Columbia
Deyton, John W., St. Louis
Dickler, Donald J., St. Louis
Dickson, Frank D., Kansas City
Dieckman, William C., Dexter
Diehr, Alvin H., St. Louis
Diehr, Maurice A., St. Louis
Diekroeger, Manuel L., Boonville
Diemer, Peter A., St. Louis
Dietrich, Karl D., Columbia
Dietz, M. Wendell, Springfield
DiLeo, Senatro W., Jennings
Dill, Foster A., Maplewood
Dillard, Erin M., Springfield
Dills, Joseph N., Springfield
Dimond, Edgar A., McKinney, Tex. (Member Greene County Medical Society)

Dinelli, Frank E., Poplar Bluff
Diveley, Rexford L., Kansas City
Dixon, John R., Brookfield
Dixon, Otto J., Kansas City
Dixon, Vewiser L., Kansas City
Dlabal, Luke J., Independence
Dmytryk, Eugene T., St. Louis
Doane, William L., Grandview
Dobrow, David O., St. Louis
Dodd, Robert B., St. Louis
Dodge, Mark, Kansas City
Dodge, Milton, Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Doggett, Sylvester, Sikeston
Doisy, Robert A., Glendale
Dolan, Daniel L., Springfield
Dolan, John T. Jr., St. Louis
Dolezal, Joseph B., Kansas City
Donahoe, James L., St. Louis
Donaldson, Robert C., St. Louis
Donley, Leo F. Jr., St. Louis
Donley, Robert R., Monett
Donnell, Harold E., DeSoto
Donnell, Robert H., Crystal City
Donnell, Thomas A., DeSoto
Dorris, Richard P., Jefferson City
Dorsch, Ervin H., Independence
Dorsett, E. Leo, St. Louis
Doubek, John C., St. Louis
Doubek, John C. Jr., St. Louis
Douglass, Jesse E., Kansas City
(Member Jasper County Medical Society)
Dowd, James F. Jr., St. Louis
Dowell, Donald M., Chillicothe
Dowell, Horace S., Chillicothe
Dowell, J. Larry, Pattonsburg
Downey, James W., Kansas City
Doyle, Charles R., St. Louis
Drace, Charles C., St. Louis
Drace, Charles C. Jr., St. Louis
Drace, James J., Cape Girardeau
Drake, Avery A., Rolla
Drake, Roy F., Kansas City
Drake, Truman G., St. Louis
Drake, William L. Jr., St. Louis
Draney, Thomas E., Kansas City
Drennan, James A., St. Louis
Drescher, Emmett B., St. Louis
Drews, Robert C., St. Louis
Drey, Norman W., St. Louis
Dreyer, Carl J., Webster Groves
Dreyer, Philip V., Huntsville
Drisko, Robert M., Kansas City
Drowns, Bruce V., Kansas City
Dreyer, William F., Houston
Drum, Helen M., Clayton
Duane, George W., St. Louis
Dubuque, Theodore J. Jr., St. Louis
Duden, Charles W., St. Louis
Duemler, John H., St. Louis
Duer, Mildred C., Kansas City
Duffy, Oliver F., Trenton
Duggan, John J. Jr., Kirkwood
Dulick, Michael, Brentwood
Duling, Gerald J., St. Louis
DuMont, Clement C., St. Joseph
Du Montier, R. J., O'Fallon
Dunaway, Howard A., Sikeston
Duncan, Ralph E., Kansas City
Duncan, Robert D., Springfield
Duncan, William H., Kansas City
Dunham, Robert H., N. Kansas City
Dunleavy, James D., Kansas City
Dunmire, George Q., Kennett
Dunn, Robert E., St. Louis
Dunshee, Robert E., Maryville
Durnell, Monaford D., Lee's Summit
Durst, Henry, Fulton
Dworkin, Saul, St. Louis
Dwyer, Frank X., Kansas City
Dwyer, Hugh L., Kansas City
Dwyer, Reinhardt D., N. Kansas City
Dwyer, Thomas L., Mexico
Dyer, Dallas J., St. Louis
Dyer, David P., Sedalia

## E

Eades, Dee W., St. Louis
Eagleton, Mark D., Clayton
Earp, Ralph K., St. Louis
Eastwood, Robert A., Springfield
Ebel, Eugene H., St. Louis
Eber, Carl T., St. Louis
Eberle, John P., St. Louis
Eberle. Vincent L., St. Louis
Echterhoff, Harry R., St. Louis
Eck, Birkle, St. Louis
Ecker, Decider, Pacific
Eckert, Clarence T., St. Louis
Ecklund, Archibald, M., San Diego, Calif.
(Member St. Louis Medical Society)
Ector, Henry J., Mexico
Edde, Clifford G., Kansas City
Edele, Eugene H., St. Louis
Edmonds, Devilla D., Kansas City
Edwards, D. R., Sedalia
Edwards, Francis L., Monett
Edwards, Joseph C., St. Louis
Edwards, Theodore F., N. Kansas City
Edwards, Waldo B., Kirkwood
(Member Jefferson County Medical Society)
Efron, Joseph, Olivette
Egan, Thomas F., St. Louis
Eggers, George W. N. Jr., Columbia
Eggleston, Donald E., Macon
Egley, Loren E., St. Louis
Eidelman, Jack R., St. Louis
Eidmann, Walter P., St. Louis
Eigel, Edwin G., St. Louis
Eimer, Charles E., St. Louis
Eisemann, Gustave, Kansas City
Eisenmann, Benjamin P., New Haven
Eisenstein, Albert B., St. Louis
Eklund, Alfred W., Pleasant Hill
Elders, Frank A. Jr., Cuba
Eldridge, Charles J., Kansas City
Elias, David J., Independence
Eliscu, Juliette, Joplin
Elkins, Ronald F., Springfield
Eller, C. Howe, Clayton
Ellersieck, Dorothy M., St. Louis
Ellery, William L., LaGrange
Ellett, William H., Appleton City
Elliott, Jomes R., Pasadena, Calif.
(Member Jackson County Medical Society)
Elliott, Raymond G., Kansas City
Elliott, Wade E., Kansas City
Ellis, Burnett E., Gideon
Ellis, Calvin C., St. Louis
Ellis, Elmer F., Kansas City
Ellis, Francis J., Springfield
Ellison, Leroy E., Maplewood
Ellsworth, Willard, Cainsville
Elrod, Dennis B., Cape Girardeau
Elser, Otto H., Independence
Elson, Julius, Ladue
Emerson, Reynolds L., Brentwood
Emmert, Fred, St. Louis
Engel, Lawrence P., Kansas City
Engelhardt, Robert C., Poplar Bluff
Engelking, David F., Kansas City
Engleman, Reinhold, S. Fort Wayne, Ind.
(Member St. Louis Medical Society)
English, Milton T. Jr., Kirksville
English, Wallace D., Cardwell
Engman, Martin F. Jr., St. Louis
Enloe, Lawrence D., Jefferson City
Enna, Carl D., Kansas City
Epp, George J., St. Louis
Epple, Kathryn C., Mexico
Epple, Lawrence K., Mexico
Erlanger, Joseph, St. Louis
Ernst, Edwin C., St. Louis
Ernst, Edwin C. Jr., St. Louis
Ernst, Joseph G., Oakland
Ernst, Richard E., St. Louis
Ernst, Roland P., St. Louis
Eshelman, Albert D., Independence
Eskeles, Irwin H., St. Louis
Esker, George, Nevada
(Member St. Louis Medical Society)
Esslinger, Arthur T. J., St. Louis
Estes, Albert M., Cape Girardeau
Estes, Jack M., Ferguson
Eto, Jackson, St. Louis
Eubank, David F., Kansas City
Eubank, Dillard M., Raytown
Eubank, William R., Kansas City
Eubank, William Y., Kansas City
Evans, Alden M., Columbia
Evans, Ezra L. Jr., Springfield
Evans, Harry T., Branson
Eversoll, Norton J., St. Louis
Ewart, John O., Sedalia
Exon, C. Stuart, Jefferson City
Eyermann, Charles H., St. Louis
Eyermann, H. Walter, Warrenton

## F

Fakhoury, Donald A., Kansas City
(Member Clay County Medical Society)
Fair, William L., Chillicothe
Fairchild, James F., Perryville
Fairshter, Alex E., St. Louis
Falk, O. P. J., St. Louis
Fallet, Charles E., DeSoto
Farley, Claude C., Kansas City
Farley, William M., St. Louis
Farney, Jacob P., Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Farnsworth, Jesse J., Kansas City
Farrar, Charles B., Cape Girardeau
(Member Mineral Area County Medical Society)
Farrar, John T., Greenwich, Conn.
(Member St. Louis Medical Society)
Farrell, Robert J., St. Louis
Farris, William W., St. Louis
Farthing, Fred R., Springfield
Farthing, Gene W., Springfield
Feierabend, Frank L., Kansas City
Feind, Earl E., Rolla
Feinstein, Leon A., St. Louis
Feist, George V., Kansas City
Feldaker, Robert M., St. Louis
Feldman, David, Clayton
Feller, Charles E., Springfield
Feller, Harold H., St. Louis
Fellhauer, Carl M., St. Louis
Feltz, Lawrence W., Perryville
Ferguson, Donald S., Kansas City
Ferguson, James T., Kansas City
Ferguson, John P. Jr., Springfield
Ferguson, L. H. Jr., Joplin
Ferguson, Luther J., St. Joseph
Ferguson, Ralph L., Joplin
Ferguson, Robert M., Webb City
Ferguson, Wilson J., Sikeston
Ferrara, John P., St. Louis
Ferrell, Thomas E. Jr., Springfield
Ferris, Carl R., Kansas City
Fessenden, Ersel M., Springfield
Finger, Donald H., St. Louis
Fingerhood, Marvin G., St. Louis
Fingert, Hyman H., St. Louis
Fink, LeRoy L., St. Louis
Finkel, Barney W., St. Louis
Finkle, Robert H., Raytown
Finley, Freeman L., St. Louis
Finn, Murray E., St. Louis
Finnegan, Joseph V., St. Louis
Finney, William O., Chaffee
Fischer, Edward H., N. Kansas City
Fischer, Erich, St. Louis
Fischer, Theodore, Altenburg
Fischer, Thomas J., Hannibal
Fish, Virgil O., St. Louis
Fisher, George E., Lebanon
Fisher, Joseph L., St. Joseph
Fisher, Stanley D., Sedalia
Fitch, C. H. Max, Springfield
FitzGerald, Leo P., University City
Fitzgerald, Robert H., Independence
Fitzgerald, William T., St. Louis
Flance, Israel J., St. Louis
Flanders, Horace F., Kansas City
Flanders. Virgil E., Kansas City
Flatley, John A., Kansas City
Fleishman, Alfred, St. Louis
Fleming, Jacob W. Jr., Moberly
Fleming, Paul D., Clayton
Fleming, Robert J., St. Charles
Fleming, Royall B., Kansas City
Fleming, Thomas S., Moberly
Fletes, James W., St. Louis
Florian, Albert J., Kansas City
Flotte, Bernard H., St. Louis
Flotte, Sylvester A., St. Louis
Flynn, Edward P., St. Louis
Flynn, Joseph E., St. Louis
Flynn, Thomas T., St. Louis
Focht, Ralph H., Strafford
Folck, William P., Kansas City
Folkner, A. L., Warrensburg
Ford, Lee T. Jr., St. Louis
Ford, Walter W., Gordonville
Foreman, Phillip B., Hannibal
Forgrave, John R., St. Joseph
Forgrave, Leon P., St. Joseph
Forman, George W., St. Joseph
Forman, Louis H., Kansas City
Forsen, James A., St. Louis
Forsman, Waldo W. Jr., St. Louis
Forster, Armand C., St. Louis
Forsyth, B. Todd, St. Louis
Forsythe, Robert W., Kansas City
Forti, John J., St. Louis
Foster, Howard M., St. Louis
Foster, Jack L., Desloge
Foster, Leon, St. Louis
Foster, Robert L., St. Louis
Fouts, Dallas B. Sr., Independence
Fowler, Fred D., Kansas City
Fowler, I. Charles, N. Kansas City
Fowler, James W., Kansas City
Fowler, Marvin L., West Plains
Fox, Leon J., St. Louis

Fox, Robert E., St. Louis
Frame, Homer G., Springfield
Francis, William C., Springfield
Francka, W. F., Hannibal
Frank, Alvin R., St. Louis
Franklin, Curtis U., Kansas City
Franklin, Harold A., St. Louis
Franklin, Max S., St. Louis
Fraser, Sydney A., St. Louis
Frazier, Robert L., Charleston
Fredeen, Robert C., Kansas City
Frederick, Raymond O., St. Louis
Frederick, Vincent L., St. Louis
Freedman, Harold, St. Louis
Freedman, Ruth S., St. Louis
Freeman, David M., St. Louis
Freeman, Hal E., Springfield
Freeman, Spencer L., Kirksville
Freiheit, Harold J., St. Louis
Freimuth, L. E., St. Louis
Frein, Donald E., Leeton
Frerking, Herbert W., St. Louis
Freund, H. G., Fulton
Freund, Samuel J., St. Louis
Frick, John P., Kansas City
Friedman, Bernard, St. Louis
Friedman, Morris L., Kansas City
Friedman, Robert H., St. Louis
Friedrichs, Vernon D., Pilot Grove
Fries, Armand D., St. Louis
Fries, John W., St. Louis
Friskel, Arthur K., St. Louis
Fritsch, Andrew J., Wichita Falls, Tex. (Member St. Louis Medical Society)
Froelich, Edwin J., St. Louis
Froelich, Rae W., Lebanon
Froelich, Robert E., Columbia
Fryer, Minot P., St. Louis
Fuchs, George J., Creve Coeur
Fuchs, George J. Jr., Columbia
Fuhrman, Donald L., Kansas City
Fulkerson, Wilbur E., Higginsville
Fulks, Richard B., California
Fulton, Albert E., Kansas City
Funsch, Edwin C., St. Louis
Funsch, Robert E., St. Louis
Furla, Gus J., St. Louis
Furlow, Leonard T., St. Louis
Fury, Tex E., Kansas City
Fuson, Levi H., St. Joseph
Fuson, William A., Trenton

## G

Gaebe, Harold C., Desloge
Gaffney, Caldwell J., St. Louis
Gafney, George T., St. Louis
Gaines, Quentin M., Kirkwood
Gainey, Harold L., Kansas City
Gale, Joseph F., Chillicothe
Gale, Philip R., St. Louis
Galeota, William R., Columbia
Gall, Ira, Clayton
Gallagher, Lionel M., California
Gallagher, Neil I., St. Louis
Gandlmayr, Jack M., St. Louis
Ganley, William C., Kansas City
Gansloser, Maximilian W., St. Louis
Gansloser, Wilbert M., Clayton
Gantner, George E. Jr., St. Louis
Gantt, Ernest S. Jr., Mexico
Gantz, John A., Affton
Garcia, Charles L., Mexico
Gard, Raymond F., Independence
Gardner, Joseph W., Glasgow
Garfinkel, Bernard T., St. Louis
Garner, Lynn M., Jefferson City
Garrett, Glen H., Columbia
Garrison, Roy F., Kansas City
Garrison, T. W., Camdenton (Member Mid Missouri County Medical Society)
Gary, George, Marceline
Gaskins, Charles W., Fredericktown
Gaskins, John H., Kansas City
Gaston, Ralph E., St. Louis
Gauer, Robert J., Kansas City (Member Clay County Medical Society)
Gaunt, Frank P., Webster Groves
Gaunt, William D., Columbia
Gay, Andrew J., St. Louis
Gay, Elizabeth K., St. Louis
Gay, George, Ironton
Gearhart, Merriam, Bethany
Gearhart, Wilbur H., St. Louis
Gedney, William B., Valley Park
Geha, Braham J., Leawood, Kans. (Member Jackson County Medical Society)
Geise, August W. Jr., Minneapolis, Minn. (Member St. Louis Medical Society)
Geisler, Gerald F., St. Louis
Gelperin, Abraham, Kansas City
Gempel, Paul A., Kansas City
Gentry, Enoch N. Jr., Kansas City
Gentry, Marvin C., Ava
Gentry, Merritt L., Springfield
German, Walter A. Jr., Springfield
Gernstetter, Sangwill L., Poplar Bluff
Gerst, Aloysius C., St. Louis
Gestring, Hugh A., Kansas City
Getelson, Joseph, Kansas City
Gibbons, Edward H., St. Louis
Gibson, David M., Kansas City
Gibson, Helen F., St. Louis
Gibstine, Marvin H., St. Ann
Giddings, Frank C., Springfield
Giem, Ross N., Sullivan
Gieselman, Ralph V., St. Louis
Giesler, Donald H., Osceola
Gildea, Edwin F., St. Louis
Gildea, Margaret C. L., St. Louis
Gilden, Jerome J., St. Louis
Gilkey, Harry M., Kansas City
Gillespie, Roy, Branson
Gillespie, William J., St. Louis
Gilliland, Oliver S., Kansas City
Gillmor, Charles S., Kansas City
Gilpin, Doris C., St. Louis
Ginsberg, Norman A., Kansas City
Gish, Rutledge, Fulton
Gissy, Charles J., St. Louis
Gist, William W., Kansas City
Gitt, Joseph J., St. Louis
Gladney, John H., St. Louis
Glascock, Donald W., Palmyra
Glaser, Martin J., St. Louis
Glass, William J. Jr., Monett
Glassberg, Bertrand Y., St. Louis
Glasscock, Ernest L., Kansas City
Glenn, Elmer E., Forsyth
Glenn, Robert R., Springfield
Glennon, William P., St. Louis
Glick, Harry N., St. Louis
Glover, Kenneth, Mount Vernon
Gnade, Albert J., St. Louis
Goebel, Joan M., St. Louis
Goettman, William I., Eglin AFB, Fla. (Member St. Louis Medical Society)
Goldberg, Isadore E., Braymer
Goldenberg, Sidney, St. Louis
Goldenson, Max J., St. Louis
Goldfarb, Alvin, Olivette
Goldman, Alfred, St. Louis
Goldman, Hyman J., St. Louis
Goldman, Melvin L., St. Louis
Goldman, Stanley L., Kansas City
Goldring, Sidney, St. Louis
Goldsich, Edward, Kansas City
Goldstein, Marcy A., St. Louis
Gollub, Samuel W., St. Louis
Gomez, Cesar A. Jr., St. Louis
Gonser, Karl B., Sedalia
Gonzalez, Mario G., Warrensburg
Goodman, J. N., Glendale
Goodman, LeRoy, Kansas City
Goodman, Nathaniel, St. Louis
Goodrich, Harold A., Webster Groves
Goodson, William H., Liberty
Goodson, William H. Jr., Kansas City
Goolsbee, Robert L., Shawnee Mission, Kans. (Member Jackson County Medical Society)
Gordon, James S., Jefferson City
Gorelick, David F., Springfield
Gorham, Arwin E., St. Louis
Gorla, Wayne O., St. Louis
Gorrell, Ned B., Lee's Summit
Gose, Don F., Springfield
Gottsch, Joseph C., Kansas City
Gowen, Leo F., St. Louis
Grabau, Gene H., St. Louis
Grable, James D., Portageville
Grabske, Charles F., Independence
Grabske, Charles F. Jr., Independence
Graeser, Richard G., St. Louis
Graham, James W., Kansas City
Graham, Wallace H., Kansas City
Graneto, Joseph A., St. Louis
Grant, Claude S., St. Joseph
Grant, John M., St. Louis
Grant, Neville, St. Louis
Grant, Samuel B., St. Louis
Grauerholz, James W., Kansas City
Graul, Elmer G., St. Louis
Graul, Walter P., St. Louis
Graves, Arthur J., Mount Vernon
Graves, F. Burton, Joplin
Gray, Walter C., St. Louis
Greaves, Eli A., Kansas City
Grebel, Clement B., St. Louis
Greditzer, Arthur S., St. Louis
Green, D. M., St. Louis
Green, John R., Independence
Green, John R., Independence
Green, Manuel E., St. Louis
Green, Roger L., Senath
Green, Stanley L., Independence
Green, William R., St. Louis
Greenberg, Charles, Los Angeles, Calif. (Member Buchanan County Medical Society)
Greene, Harry L., Hannibal
Greene, W. Wallace, Shawnee Mission, Kans. (Member Jackson County Medical Society)
Greenman, Marshall B., Clayton
Gregory, Ralph W., Kansas City
Gresick, Robert J., St. Louis
Griege, Charles W., Florissant
Griffin, Mary E. P., Buffalo
Griffin, Olin A. Jr., Buffalo
Griffith, John A. Jr., Kansas City
Griggs, James Y., St. Louis
Grim, Edward M., Kirksville
Grimes, Manning E., St. Joseph
Grindon, Joseph B., St. Louis
Griot, Albert J., St. Louis
Groce, George, Fulton
Grogan, Frank M., St. Louis
Gronau, Axel R., St. Louis
Grossman, Marvin, Fredericktown
Grove, Gulp W., Knobnoster
Growdon, John A., Kansas City
Grubb, Paul H., Joplin
Grueb, Paul M., St. Louis
Gruenfeld, Gerhard E., St. Louis
Grundmann, William H., St. Louis
Grybinas, Vytautas J., Belleville, Ill. (Member St. Louis Medical Society)
Gubin, Alan S., Caruthersville
Guccione, Joseph B., St. Louis
Guffey, Don C., Kansas City
Guhleman, Henry V. Jr., Jefferson City
Guldner, Edmond, Lamar
Gulick, Charles R., St. Louis
Gullett, Charles C., Kansas City
Gum, William R., St. Louis
Gummels, Belmont B., St. Louis
Gundle, Sigmund, Kansas City
Gunn, Jack, Versailles
Gunn, Richard W., Kansas City
Gunn, Walter T., St. Louis
Gurnee, Landon H., Jefferson City
Guze, Samuel B., St. Louis
Gzell, Ronald, St. Louis

## H

Hackmeyer, Rubin, St. Louis
Haddock, James N., Webster Groves
Haffner, Heinz, St. Louis
Hagan, Daniel J., St. Louis
Hagebusch, Omer E., St. Louis
Hagemann, Paul O., St. Louis
Haggen, Margaret E., Kansas City
Hahn, Andrew L., Springfield
Haight, John M., Kansas City
Haith, Walter F., Kansas City
Hale, Tyre H., St. Louis
Haley, Jack A., Prairie Village, Kans. (Member Jackson County Medical Society)
Hall, Andy Jr., St. Louis
Hall, David G., Columbia
Hall, David W., Springfield
Hall, Durward G., Springfield
Hall, Eugene W., Ferguson
Hall, Frank W., Cape Girardeau
Hall, Lee A., Clayton
Hall, Marvin F., Joplin
Hall, Preston C., St. Louis
Hall, Robert A., St. Louis
Hall, Thomas B., Kansas City
Halperin, Phillip H., Kansas City
Halpern, Lawrence K., St. Louis
Hamel, Herbert A., Kansas City
Hamill, Robert W., Kansas City
Hamilton, Caldwell K., Clayton
Hamilton, Eugene G., Clayton
Hamilton, Eugene H., Joplin
Hamilton, William P., Aurora
Hamlin, Wyeth, Hannibal
Hammes, Romar E., St. Charles
Hammler, Christiana V., St. James
Hammond, John J., St. Louis
Hampton, Henry E., St. Louis
Hampton, Oscar P. Jr., St. Louis
Hampton, Stanley F., St. Louis
Hamtil, Edward W., St. Louis
Hanan, Ernest B., Springfield
Handler, Eric, St. Joseph
Handler, Fred P., Jefferson City

Hanes, Lee D., Kansas City
Hanes, Robert L., Grandview
Hanford, Wesley W., St. Louis
Hankin, Norman M., St. Louis
Hanlon, C. Rollins, St. Louis
Hanlon, Russell C., Columbia
Hanna, Richard E., St. Louis
Hans, Willard J., St. Louis
Hansbrough, Eugene T., Poplar Bluff
Hansel, French K., St. Louis
Hansen, Arthur L., Butler
Hanser, S. Albert, St. Louis
Hanser, Theodore H., St. Louis
Hanss, Armand W., Springfield
Hardacre, Ruth A., Kansas City
Hardesty, Joel W., Hannibal
Hardwicke, Henry M., Jefferson City
(Member Boone County Medical Society)
Hardy, Guerdan, Clayton
Hardy, John W., Kansas City
Hardy, Joseph A. Jr., St. Louis
Harell, Alex, St. Louis
Harford, Carl G., St. Louis
Harkins, William B., St. Louis
Harkness, Harry, Warrensburg
Harland, Robert E., Ironton
Harless, Morris S., Kansas City
Harmann, Martin F., St. Louis
Harms, Florian L., Salisbury
Harned, Bert W., Kansas City
Harner, Casper G., St. Joseph
Harper, Fleming B., St. Louis
Harrell, Henry J., Morrisville
Harrington, William J., St. Louis
Harris, Boyd L., San Diego, Calif.
(Member Jackson County Medical Society)
Harris, Charles W., St. Louis
Harris, Hinman A., University City
Harris, Solon P., St. Louis
Harrison, Lee B., St. Louis
Harrison, Stanley L., St. Louis
Hart, Lawrence W., Kansas City
Hart, Martin M., Salem
Hart, Pearl V., Coatsville
Hartin, Hugh R., St. Louis
Hartman, Paul T., St. Louis
Hartmann, Alexis F., St. Louis
Hartnett, Leo J., Clayton
Hartstein, Jack, University City
Hartwell, Basil O., Drexel
Hartwig, Frederick H., Kansas City
Hartwig, John A., St. Louis
Harvey, Harold D., Springfield
Harwell, James L., Poplar Bluff
Harwell, J. Lester, St. Louis
(Member Butler-Wayne-Ripley County Medical Society)
Hash, Emalyn H., Kansas City
Hashinger, Edward H., La Jolla, Calif.
(Member Jackson County Medical Society)
Haskell, Ralph E., Norborne
Hasselblad, Oliver W., New York, N. Y.
(Member North Central Counties Medical Society)
Hassett, Henry A., St. Louis
Hasson, Jack, St. Louis
Hasson, Robert, Moberly
Hata, Daikichi, Boonville
Hatfalvi, Bela I., St. Louis
Hauptmann, William L., St. Louis
Hausheer, Herman J., Independence
Haw, Marvin T. Jr., Bonne Terre
Hawk, Bray O., St. Louis
Hawker, William D., St. Louis
Hawkins, George L. Jr., St. Louis
Hawkins, Lee W., Chesterfield
Hayden, Loyola F., St. Louis
Hayek, Welsey E., St. Louis
Hayes, Lawrence L., Kansas City
Hayes, Paul W., St. Joseph
Haynes, James W., St. Louis
Haynes, Lee, Kansas City
Haynes, Pugh Jr., St. Louis
Haynes, Robert C., Marshall
Haynes, Solon E., Kansas City
Hazen, Robert M., Kansas City
H'Doubler, Francis T. Jr., Springfield
Headrick, John A., St. Louis
Hecker, Joseph E., Jackson
Heeb, Max A., Sikeston
Heideman, Alvah G., St. Louis
Heideman, Milo L., St. Louis
Heidenreich, Harry L., St. Louis
Heifetz, Carl J., St. Louis
Hein, Paul A. Jr., St. Louis
Heinbecker, Peter, St. Louis
Helbing, Edward J., St. Louis
Heller, B. Marcus, Kansas City
Hellerstein, Stanley, Kansas City
Hellweg, Charles E., Mount Vernon
Helm, James O., New Florence
Helman, Richard G., Kansas City
Henderlite, John W., St. Louis
Hendin, Aaron, Olivette
Hendren, Glenn W., Liberty
Hengen, Henry E., Bridgeton
Henke, Charles F., St. Louis
Hennelly, John J., St. Louis
Henrickson, Hardin M., Poplar Bluff
Henrickson, Hardin O., Poplar Bluff
Henry, Clarke L., Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Henry, Schubert D., Kansas City
Henschel, Eugene V., St. Louis
Hensley, Daniel R., Lilbourn
Herbert, Charles T., Cape Girardeau
Herman, Allen I., St. Joseph
Herman, Morris, St. Louis
Herrick, Harold C., La Grange
(Member St. Louis Medical Society)
Herrman, George V., Kansas City
Hershey, Falls B., University City
Hertel, Albert L., St. Louis
Hetlage, Louis P., Troy
Heusler, Anton F., St. Louis
Heyer, Oscar C., St. Louis
Hibbard, Blaine Z., Kansas City
Hickerson, William H., Independence
Hickey, James L., St. Louis
Hickey, Robert F., St. Louis
Higgins, John W., St. Louis
Higgins, Robert S., Kansas City
Hilbert, Paul H., St. Louis
Hildreth, H. Rommel, St. Louis
Hill, Jack H., Kansas City
Hill, James E., Fulton
Hill, Jesse N., Independence
Hilton, Paul E., Kirksville
Hines, Arthur A., St. Louis
Hines, Kenneth K., St. Louis
Hink, Frederick W., Independence
Hirsch, Albert, Vandalia
Hirsch, Joe E., Kansas City
Hite, Henry A., Green Ridge
Hobart, Carl A., St. Louis
Hobbs, Alonzo G., St. Louis
Hobbs, Earl B., Smithville
Hobbs, George H., Mount Vernon
Hobbs, John E., St. Louis
Hoctor, Emmett F., Farmington
Hodge, Robert H., N. Kansas City
Hodges, Fred J. III, St. Louis
Hodgson, Frank H., Kansas City
Hoelscher, Harold F., Warrenton
Hoeper, Samuel D., Grandview
Hoffman, Jacob S., Kansas City
Hoffmann, Augustin D., St. Louis
Hoffmann, R. Lee, Kansas City
Hoffmann, Ronald E., St. Louis
Hofsommer, Armin C., Webster Groves
Hofstatter, Leopold, St. Louis
Hofstatter, Lilli, St. Louis
Hogan, Daniel F., Port Isabel, Tex.
(Member Jackson County Medical Society)
Hogan, Patrick C., St. Louis
Hogancamp, Charles E., St. Louis
Hogeboom, George W., Springfield
Hogg, Garrett S. Jr., Cabool
Hogue, Frank S., Kansas City
Holbrook, Charles K., St. Louis
Holcomb, John K., Louisiana
Holder, Thomas M., Kansas City
Holley, Donald B., Camdenton
(Member Mid Missouri County Medical Society)
Hollingsworth, Ray S., Clinton
Hollis, Richard W., Springfield
Hollo, Vencel W., St. Louis
Hollweg, Kenneth C., Kansas City
Holman, Jurney H., Nacogdoches, Tex.
(Member North Central Counties Medical Society)
Holman, Melvin V., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Holmes, Daniel E., Springfield
Holmes, David R., Springfield
Holscher, Edward C., St. Louis
Holt, Earl P. Jr., St. Louis
Holt, Waldo S., Kansas City
Holton, Edward B., Independence
Holtzman, Samuel, Joplin
Homan, Joseph S., St. John's
Hook, Waller G., Kansas City
Hooker, John H., Alton, Ill.
(Member Pike County Medical Society)
Hooper, Robert N., Kansas City
Hoover, H. Lee Jr., Springfield
Hope, James L., Lebanon
Hopkins, Florian G., Gideon
Hopkins, Thomas J., Sedalia
Hopkins, T. Spencer, Sedalia
Hornback, Edward R., Joplin
Horner, Glennon A., Marceline
Horner, John L., St. Louis
Hornstra, Robijn K., Kansas City
Horst, Otto C., Springfield
Horton, James D., Springfield
Horwitz, Irwin B., St. Louis
Hosto, Leland E., St. Louis
Houck, Russell M., Kecoughtan, Va.
(Member Clay County Medical Society)
Houston, Vincent T., St. Louis
Howden, Thomas L., St. Joseph
Howe, Albert L., St. Louis
Howe, Louis F., St. Louis
Howell, B. D., Brookfield
Hoxworth, Gerald M., Cape Girardeau
Hrdlicka, Victor E., St. Louis
Huber, Erwin T., St. Louis
Huber, Lasley E., Moberly
Huck, Frank F., Fenton
Huck, Richard F., St. Louis
Huckstep, Robert A., Farmington
Huey, Kenneth H., Tempe, Ariz.
(Member St. Louis Medical Society)
Huggins, Albert M., St. Louis
Hughes, Gerald E., Kansas City
Hughes, Judson M., St. Joseph
Hughes, Robert G., St. Louis
Hughes, Shelby B., Clinton
Hulbert, Bernard, St. Louis
Hummel, Anton J., St. Louis
Humphrey, George E., St. Louis
Humphrey, James, Mound City
Humphreys, Edward T., Boonville
Hungate, Carroll P., Kansas City
Hunleth, Frank E., St. Louis
Hunt, Claude J., Kansas City
Hunt, John W. Jr., Leadwood
Hunt, Lloyd H., Salem
Hunt, William J., St. Joseph
Hunter, James R., Webster Groves
(Member Callaway County Medical Society)
Hunter, Martin P., Kansas City
Hunzicker, Warren J., Kansas City
Hurst, Ben B., Lebanon
Hurst, Wilfred W., Joplin
Hurwitt, Frank, Kansas City
Husted, George W., Parma
Hutchinson, James H. Jr., St. Louis
Hutto, A. Herman, St. Louis
Hutton, Joseph L., St. Louis
Hyde, Lawrence L., Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Hyman, Anna, St. Louis
Hyndman, Charles E., St. Louis

### I

Ide, Lucien W., St. Joseph
Imes, Clifford H., Lynwood, Calif.
(Member Ozarks Medical Society)
Imes, Elvin D., Maryville
Ingham, Walton C., Kansas City
Inkley, John J., St. Louis
Irick, Carl C., Webster Groves
Irvin, William M., St. Louis
Irwig, Fred, Kansas City
Isbell, Charles H., Carthage
Isom, Waldo B., Knox City
Israel, Milton R., St. Louis
Ittner, George W. Jr., St. Louis
Ivy, Henry B., Springfield
Izmirlian, Grant, Webster Groves

### J

Jabczenski, Felix F., Ft. Huachuca, Ariz.
(Member St. Louis Medical Society)
Jackson, Elmer C., Fulton
Jackson, Robert L., Columbia
Jackson, Vernon B., Fulton
Jackson, William R., Kansas City
Jackson, William R., Maryville
Jacob, Walter P., Kansas City
Jacobs, Charles C., St. Louis
Jacobs, Frederick A., St. Louis
Jacobs, Morton, Kansas City
Jacobs, Walter H., Kansas City
Jaeger, Joseph N., Jackson

Jaime, Nicholas, Kansas City
James, Norman A., St. Louis
James, Otis E. Jr., Kansas City
James, William M., St. Louis
Jameson, James E., Springfield
Janney, James G. Jr., Clayton
Jansen, Robert, Kansas City
Jarvis, Garth L., St. Louis
Jarvis, James A., Kansas City
Jaudon, Joseph C., Clayton
Javaux, Everett J., St. Louis
Jean, J. Ted., St. Louis
Jeans, Virgil, Joplin
Jeffries, Robert C., Kansas City
Jenab, Morteza, Prairie Village, Kans. (Member Jackson County Medical Society)
Jenkins, Paul A., Lebanon
Jennett, Harry N., Kansas City
Jennett, James H., Kansas City
Jennings, Ethlyn C., N. Kansas City (Member Platte County Medical Society)
Jensen, Joshua E., St. Louis
Jick, Sidney, St. Louis
Johns, George A., Pikesville, Md. (Member Saline County Medical Society)
Johns, Leo E., Kansas City
Johnson, C. Laurence, Kansas City
Johnson, Charles R., San Francisco, Calif. (Member Marion-Rall-Shelby County Medical Society)
Johnson, Charles S., Warrensburg
Johnson, David S., St. Louis
Johnson, Earl W., Cape Girardeau
Johnson, Edward M., Ft. Campbell, Ky. (Member Chariton-Macon-Monroe-Randolph Counties Medical Society)
Johnson, Frank C., Doniphan
Johnson, George A., Springfield
Johnson, George L., San Francisco, Calif. (Member Greene County Medical Society)
Johnson, Grover C., Marthasville
Johnson, James S., Kansas City
Johnson, Joseph E., Kansas City
Johnson, Mitchell D., Ferguson
Johnson, Richard E., Columbia
Johnson, Roy, Ferguson
Johnson, Thomas M., Kansas City
Johnson, Warford B., Springfield
Johnson, William F., Springfield
Johnston, Joseph L., Springfield
Johnstone, John Jr., Kirkwood
Johnstone, Paul N., Kansas City
Jolly, Benjamin N., Mexico
Jolly, William H., Mexico
Jonas, Harry S. Jr., Independence
Jones, Andrew B., St. Louis
Jones, Augustin, St. Louis
Jones, Charles E., Liberty
Jones, Dorothy J., Clayton
Jones, Edna M., Clinton
Jones, Edward S., Harrisonville
Jones, George H., Kansas City
Jones, Grey, St. Louis
Jones, James B., St. Louis
Jones, John B., Kirksville
Jones, Keith D., Warrensburg
Jones, Otey S., St. Louis
Jones, Ralph H., Santa Fe, N. M. (Member Saline County Medical Society)
Jones, Richard A., St. Louis
Jones, Theodore R., Kansas City
Jones, Victor, Brentwood
Jones, Vincent L., St. Louis
Jordan, Edward J., St. Louis
Jordan, Walter R., St. Louis
Jorel, Louis E., Springfield
Jorstad, Louis H., St. Louis
Joseph, Harold J., Ladue
Joslyn, Harold L., St. Louis
Jost, Charles A., St. Louis
Jotte, Richard F., St. Ann
Juden, Alexander G., Cape Girardeau
Judge, Walter T., Crystal City
Judy, Joseph D., Ferguson
Jung, J. Marshall, Illmo
Justus, John B., Kansas City

## K

Kahn, Lawrence, St. Louis
Kallenbach, Glen P., Mexico
Kamakas, Nicholas, Ferguson
Kamm, William A., St. Louis
Kanagowa, Hajime H., Jefferson City
Kane, Clyde E., St. Louis
Kantor, Julius M., Kansas City
Kantor, Samuel, Kansas City
Kaplan, Albert, St. Louis
Kappesser, Netajean B., St. Louis
Kappesser, Roland C., St. Louis
Karandjeff, Apostle D., St. Louis
Kardesch, Milton, St. Louis
Karl, Michael M., St. Louis
Karraker, Alvan G., Farmington
Karsh, Robert S., St. Louis
Kartus, Irving, Kansas City
Kaskie, Clifford R., Clayton
Kasten, Melvin C., Cape Girardeau
Katz, Milton, Kansas City
Kauffman, Ruth, Versailles
Kaul, Philip G., Kansas City
Kayes, Jack, St. Louis
Keairnes, Harold W., Independence
Kealhofer, George C., Kansas City
Keats, Theodore E., Columbia
Keeble, Charles B., St. Louis
Keeler, James E., Kansas City
Keenoy, John J., St. Louis
Keffler, Karl L., St. Louis
Kehoe, John J., St. Louis
Keim, John H., Cape Girardeau
Keim, John P., St. Louis
Keller, Joseph M., St. Louis
Keller, Louis, St. Louis
Keller, Maurice J., St. Louis
Keller, Robert M., Wentzville
Kellett, John G., Webster Groves
Kelley, Gilbert B., Savannah
Kelley, Isaac D. Jr., St. Louis
Kelley, Ralph R., Savannah
Kelley, Robert W., St. Louis
Kelling, Douglas G., Waverly
Kelling, Jordon, Waverly
Kelly, Eugene H., Ironton (Member Jackson County Medical Society)
Kelly, Marshall W., Jefferson City
Kelly, R. Emmet, St. Louis
Kelsey, Kenneth L., Aurora
Keltner, Raymond O., Kansas City
Keltner, Raymond M. Jr., St. Louis
Kendall, Charles A., Independence
Kendig, John H., St. Louis
Kendis, Joseph B., St. Louis
Kennard, George K., Kansas City
Kennedy, William J., Ann Arbor, Mich. (Member St. Louis Medical Society)
Kenney, Roy E., Neosho
Kent, Bela K., Kansas City
Kent, Clifford F., Kansas City
Keown, Kenneth K., Columbia
Kepler, Earl C., Fulton
Kern, Stanley D., Osceola
Kerr, David N., St. Louis
Kerr, Frank T., Monett
Kerr, Russell, Kansas City
Kessler, Joseph J., St. Louis
Ketcham, William M., Kansas City
Ketron, Marvin B., Kansas City
Kettelkamp, George D., St. Louis
Ketterman, Grace H., Hickman Mills
Ketterman, Herbert L., Kansas City
Kettner, Edward G., Kansas City
Key, James S., Springfield
Keyes, Edward L., St. Louis
Kibbe, Edgar A., California
Kieber, Robert W., St. Joseph
Kieffer, Roland S., St. Louis
Kieffer, Victor B. Jr., St. Louis
Kiehl, Katharine, Joplin
Kienberger, Paul A., Independence
Kiene, Richard H., Kansas City
Kienzle, Edward C., St. Louis
Kilker, Clarence H., St. Louis
Kilker, Donald E., St. Louis
Kimball, I. W., Parkville
Kimball, Merritt H., Kansas City
Kimberlin, Herbert C., Trenton
Kimelman, Nathan, St. Louis
Kimes, Ira D., Cameron
Kinder, James A., Cape Girardeau
King, Elbert R., Boise, Idaho (Member West Central Missouri Medical Society)
King, Eustace E. III, St. Louis
King, Francis C., Kirkwood
King, J. Tenbrook, Kansas City
King, James P., St. Louis
King, John V., St. Louis
King, Morris K., St. Louis
King, Richard H., Clinton
King, Samuel J., St. Louis
King, Walter R., Kansas City
Kingsbury, Helen, Shawnee Mission, Kans. (Member Jackson County Medical Society)
Kingsland, Robert C., Clayton
Kinsella, Edward D., St. Louis
Kinsella, Maria S., St. Louis
Kinsella, Peter W., St. Louis
Kinsella, Ralph A., St. Louis
Kinsella, Ralph A. Jr., St. Louis
Kipnis, David M., St. Louis
Kirk, Charlie W., Hopkins
Kirschman, Robert E., Joplin
Kirstein, Melvin B., St. Louis
Kirtz, Louis P., Clayton
Kiser, David M., Kansas City
Kissane, John M., St. Louis
Kister, George E., St. Charles
Kistner, William F., St. Louis
Kitchen, William M., Kansas City
Klaff, Daniel D., St. Louis
Klebba, Larry B., Jefferson City
Klein, Andrew G., St. Louis
Klein, Arnold G., St. Louis
Klein, Bert H., St. Louis
Klein, Edward H., Kansas City
Kleinschmidt, Clinton, St. Louis
Klenk, Charles L., St. Louis
Klepinger, Dayton P., Neosho (Member Jackson County Medical Society)
Kline, Edmund W., St. Joseph
Klinge, Frederick W., St. Louis
Klingner, George M., Springfield
Klippel, Allen P., Clayton
Klippel, Bernhardt W., St. Louis
Kloecker, Herman J., St. Louis
Kloeppel, Carl F., St. Louis
Klym, Nicholas, St. Louis
Knabb, Arthur D., Springfield
Knabb, Harris, Springfield
Knabb, Henry F., Coral Gables, Fla. (Member Greene County Medical Society)
Knabb, Henry F. Jr., Springfield
Knabb, Kenneth E., Springfield
Kneal, E. Ellsworth, St. Louis
Kneibert, Fred L., Poplar Bluff
Knepper, Paul A., St. Joseph
Knese, Luke A., St. Louis
Knight, Franklin P., St. Louis
Knight, John S., Kansas City
Knight, Lyle B., Lee's Summit
Knight, William A. Jr., St. Louis
Knipschild, B. F., Marshall
Knoch, H. Kermit, Kansas City
Knock, Henry L., Kirkwood
Knoke, Frederick W. Jr., St. Louis
Knowlton, Norman P., Jr., St. Louis
Knox, Earl R., Kansas City
Koch, Robert E., Clayton
Koehler, Charles A., Kansas City
Koehler, John W., Joplin
Koenig, George H., St. Petersburg, Fla. (Member St. Louis Medical Society)
Koenig, Karl F., St. Louis
Koerner, Kenneth A., Clayton
Koessel, Arthur W., St. Louis
Kohler, Eugene J., St. Louis
Kohler, Louis H., St. Louis
Kohn, Cecil M., Kansas City
Kolze, Vernon W., Springfield
Komanetsky, William M., St. Louis
Konzelmann, John A., St. Louis
Koon, Ben H., Bolivar
Kopp, Jules H., St. Louis
Kopp, Leonard J., St. Louis
Koppenbrink, Walter E. Jr., Higginsville
Korn, Robert L., Clayton
Korth, William M., Kansas City
Kotner, Lawrence M., St. Louis
Kountz, William B., St. Louis
Koutsoumpas, William V., St. Louis
Kowert, Edward H., St. Louis
Kozal, Francis L., Crystal City
Kozlowski, Albert E., St. Louis
Kraft, Edward O., Brentwood
Kraft, Jacob, Kansas City
Kramer, Fred, St. Louis
Kramolowsky, Helmuth H., St. Louis
Kraner, Justin F., St. Louis
Kranson, Seymour J., Independence
Kratz, Frederick W., Liberty
Kratz, Paul E., Cape Girardeau
Krause, G. Lynn Jr., St. Louis
Krebs, Joseph M., Clayton
Krebs, Otto S., St. Louis
Krieger, John L., St. Louis
Krivda, Joseph F., St. Louis
Krojanker, Rolf, St. Louis
Kromer, Charles, St. Louis
Kubin, Milford T., Columbia
Kubitschek, Paul F., St. Louis
Kuebrich, Thomas C., Ferguson
Kuenzi, Donald E., Kansas City
Kuhlman, Robert E., St. Louis
Kuhn, John R. Jr., Joplin
Kuhn, William F. II, Kansas City

Kulowski, Jacob, St. Joseph
Kurth, Robert K., St. Louis
Kurz, Rudolph F., St. Louis
Kutryb, Walter J., St. Louis
Kuttner, Marianne, St. Louis
Kyger, Fred B., Kansas City
Kyger, John E., Kansas City
Kyner, Thomas A., Kansas City

### L

Lachance, Leopold, Centralia
Lacy, N. Eugene, Kansas City
Ladd, Charles B., St. Louis
Ladenson, Roland P., Columbia
LaDriere, Raymond J., St. Louis
Laffoon, France L., Vista, Calif.
(Member Jackson County Medical Society)
LaHue, Lilburn D., Butler
Lally, James J., Kansas City
Lam, Robert L., St. Louis
Lamar, Robert F., Kansas City
Lamb, Wanda, St. Louis
Lambert, Marian, Kansas City
Lamke, Charles M., Columbia
Lamy, John E., Sedalia
Landau, Daniel B., Hannibal
Landau, William M., St. Louis
Landis, George K., Kansas City
Landor, John H., Columbia
Landree, James C., St. Louis
Lane, Clinton W., St. Louis
Laney, Roland L., Carlsbad, Calif.
(Member Jasper County Medical Society)
Lang, John J., Arlington, Va.
(Member St. Louis Medical Society)
Langan, William J. Jr., St. Louis
Lange, Adolph C., St. Louis
Langeluttig, Harry V., Mount Vernon
Langhus, Melvin O., North Kansas City
Langston, Walter R., Springfield
Lanier, Earl W., St. Louis
Lankford, Harold D., Mexico
Lanning, Richard C., Ste. Genevieve
Lanning, Robert J., Hannibal
Lansche, Elmer A., St. Louis
Lansche, W. Edward, St. Louis
Lapi, Angelo, Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Lapp, Harry C., Kansas City
Larimore, Joseph W., St. Louis
Larkin, Rosemary R., St. Louis
Larsen, Kenneth V., St. Louis
Larson, Paul U., St. Louis
LaSalle, Michael W., Kansas City
(Member Grand River Medical Society)
Lassar, Gilbert N., St. Louis
Latham, Kenyon S., California
Latham, Raymond W., Kansas City
Latimer, Walter N. A., Hannibal
Lattinville, Henry E., St. Louis
Lauber, Joseph J., Creve Coeur
Lauer, Daniel J., Kansas City
Laurenzana, Frank P., Kansas City
Lawless, Charles L., Marshall
Lawrence, George H., St. Louis
Lawrence, John R., Marshall
Lawton, John T., St. Louis
Lawton, Lawrence M., St. Louis
Lawton, Thomas P., St. Louis
Layton, Ira C., Kansas City
Leahy, John G., St. Louis
LeBlanc, Leo J., St. Louis
L'Ecuyer, Jerome L., St. Louis
Lederer, Charles M., Warrensburg
Lederman, Joseph, St. Louis
Lee, Carleton H., St. Joseph
Lee, George C., Kansas City
Lee, Gerald B., Columbia
(Member St. Louis Medical Society)
Leech, Charles A., Columbia
Leech, Maurice P., Fayette
Legner, Stanley G., Perryville
Lehner, Richard L., Kansas City
Leider, Robert J., St. Louis
Leidinger, Karl J., Republic
Leifer, William W., Kansas City
Leightner, William, St. Louis
Leitch, Cecil G., Blue Springs
Leitz, Frank B., Kansas City
Lembeck, Joseph A., St. Louis
Lemmon, George B., Springfield
Lemmon, G. Bruce Jr., Springfield
Lenobel, Milton I., Clayton
Lentz, Clark H., Kansas City
Lentz, Harold C., Kansas City
(Member Ozark Medical Society)
Leo, William A., Kansas City
Leonhardt, Erwin M., St. Louis
Lerner, Abe F., St. Louis
Lerwick, Everett R., St. Louis
Leslie, Charles H., Kirkwood
Leslie, James F., Springfield
Leslie, J. Paul, Jefferson City
Leslie, James T., Louisville, Ky.
(Member Cole County Medical Society)
Leslie, James T. Jr., Jefferson City
Levey, Harry B., Kansas City
Levey, Simon A., St. Louis
Levin, Marvin E., University City
Levin, Sidney S., St. Louis
Levitt, Joseph, St. Louis
Levy, Irwin, St. Louis
Lewellen, Charles H., Louisiana
Lewin, Wilbur H., St. Louis
Lewis, Albert G., Smithville
Lewis, James E. Jr., St. Louis
Lewis, Ray B., Columbia
Lewis, Revis C., Kansas City
Leydig, Stanley M., St. Louis
Lichtor, Alexander, Kansas City
Lichtor, Joseph M., Kansas City
Lichty, Charles A., Shelbina
Lieb, Francis X., St. Louis
Lieb, Otto, St. Louis
Lieberman, B. Albert Jr., Kansas City
Lieberman, David M., St. Louis
Liebmann, Fritz M., St. Louis
Liese, Grover B., St. Louis
Liggett, Hiram S., St. Louis
Lilly, Terry E., Kansas City
Lilly, Terry E. Jr., Kansas City
Limbaugh, Walter R., Hayti
Lindeman, Carl H., St. Louis
Lindquist, Carl N., Kansas City
Link, Alexander J., St. Louis
Link, Vance E., Independence
Linville, Howard E., Kansas City
Lipschitz, Ervin, St. Louis
Lipsitz, Ellis S., St. Louis
Lischer, Carl E., St. Louis
Lissack, Edmund, Concordia
Liston, Odus, Oakgrove
Litsey, James J. II, St. Louis
Littauer, David, St. Louis
Little, Monroe H., St. Louis
Littmann, Lewis E., St. Louis
Litton, Lyle D., Springfield
Litzow, Louis T., St. Louis
Lloyd, Ivan E., Independence
Lockhart, Charles E., Springfield
Lodwick, Gwilym S., Columbia
Loeb, Virgil Jr., St. Louis
Loeffel, Ellen S., St. Louis
Loewy, Louise B., Kansas City
Logan, James A., Warsaw
Logue, John T., Columbia
Lohr, Curtis H., St. Louis
Lohr, Robert W., Florissant
Lohrentz, Lois H., Kansas City
Loitman, Bernard, St. Louis
Londe, Sol, St. Louis
London, Stanley L., St. Louis
Lonergan, Warren M., St. Louis
Long, Charles L. Jr., St. Louis
Long, David S., Harrisonville
Long, Forrest C., Savannah
Long, Frank B., St. Louis
Long, Frank B., Sedalia
Long, R. Stacy, Kansas City
Longenecker, Joe L., Joplin
Lonsway, Maurice J., St. Louis
Lonsway, Maurice J. Jr., St. Louis
LoPiccolo, Vincent J., St. Louis
Lord, Richard E., St. Louis
Lorenc, Ernest, Springfield
Lottes, James O., St. Louis
Loughead, John R., Poplar Bluff
Love, Drury M., Kansas City
(Member Clay County Medical Society)
Love, Walter S., Nevada
Loving, B. Rush, Ballwin
Lovinggood, Thomas A., Cape Girardeau
Lowe, Alvin L., Sedalia
Lowe, Horace A., Springfield
Lowe, Horace A. Jr., Springfield
Lowell, Paul, Kansas City
Lowenstein, Paul S., St. Louis
Lowney, John F., Columbia
Lowrey, Ford J., Kansas City
Loyd, Earl L., Jefferson City
Lucas, Fred V., Columbia
Lucido, Joseph L., St. Louis
Lucke, Eugene M., Hannibal
Luckenbill, Paul T., Plattsburg
Luedde, Fullerton W., St. Louis
Luedde, Philip S., St. Louis
Luh, Andrew, St. Louis
Luke, Herbert K., St. Louis
Luman, Frank E., Edina
Lund, Herluf G., St. Louis
Lund, Robert H., Clayton
Lundgren, Fred H. Jr., Kansas City
Luppens, Albert F,. Lee's Summit
Lurie, Harold H., Springfield
Lusk, Charles A. Jr., Butler
Luten, Drew W., St. Louis
Luter, Carter W., Butler
Lutkewitte, Joseph F., Ste. Genevieve
Lutz, Martin H., St. Louis
Lyddon, Harold R. Jr., Kansas City
Lyle, Ray M., Kansas City
Lyle, Robert R., Versailles
Lyman, Edward H., St. Louis
Lynxwiler, Chester P., St. Louis
Lytle, William R., Rolla
Lyttle, Garnet C., St. Louis
Lytton, George J., Kansas City
Lytton, William B., St. Louis

### M

McAdam, Charles R., St. Louis
McAfee, C. Alan, St. Louis
McAlester, Andrew W., Brownsville, Tex.
(Member Jackson County Medical Society)
McAlhany, Howard J., Springfield
McArtor, Thomas R., Browning
McBurney, Alexander A., Hanover, N. H.
(Member Saline County Medical Society)
McBurney, Charles A., Slater
McCall, Edwin L., St. Louis
McCalla, John P., Kansas City
McCallum, Andrew J. C., Aurora
McCann, John F., St. Louis
McCann, Louis P., Nevada
McCanse, Andrew, Kansas City
McCarroll, Henry R., St. Louis
McCarthy, Eugene F., St. Louis
McCarthy, John M., St. Louis
McCarthy, Thomas D., Ferguson
McCarthy, William F., Blue Springs
McCaughan, John M., St. Louis
McClanahan, Robert C., Kansas City
McCloskey, R. Bruce, Webster Groves
McClure, David N., Clayton
McClure, Thomas C., Sikeston
McConchie, James E., Kansas City
McCool, James F. Jr., St. Louis
McCorkle, E. Lee, Marshall
McCormick, James E., Kansas City
McCoy, Frederick J., Kansas City
McCoy, Warren R., Caruthersville
McCracken, Samuel R., Excelsior Springs
McCraw, Doyle C., Bolivar
McCubbin, Clarence R., Kansas City
McCullough, Campbell C., Kansas City
McCuniff, William B., Kansas City
McDaniel, John R., St. Joseph
McDermott, Alfred E., Perryville
McDonald, Bruce P., Kansas City
McDonald, Eugene F., Jackson
McDonald, George H., St. Louis
McDonald, Victor G. Jr., Kansas City
McDonald, Wilbur P., St. Joseph
McDonnell, John F., Kansas City
McDowell, Frank, St. Louis
McElroy, Glenn L., Columbia
McElvain, Robert C., St. Louis
McFadden, Gene A., Waverly
McFadden, James F., St. Louis
McFadden, James F. Jr., St. Louis
McFarland, Morris D., Kansas City
McGannon, Paul T., Kansas City
McGinnis, Byron J., St. Louis
McGinnis, William F., St. Louis
McGinty, Charles P., Cape Girardeau
McGuire, Thomas H., Kansas City
McHale, Thomas C., Kansas City
McHaney, John W., Jefferson City
McIntire, Emery J., Carthage
McIntyre, John D., Kansas City
McKaskle, Clarence W., Caruthersville
McKee, Joseph W., Kansas City
McKee, Oliver A., Kirkwood
McKee, Wallace P., Kansas City
McKinstry, Karl V., DeSoto
McKnelly, William V., Jefferson City
McLain, B. M., Poplar Bluff
McLean, Harry A., St. Louis
McLean, Royal C., St. Louis
McLelland, Richard I., St. Louis
McLeod, John, Kansas City
McMahon, Alphonse, St. Louis
McMahon, Bernard J., Clayton
McManamon, Thomas V., Florissant
McMillan, Thomas E., Kansas City
McMurray, Herbert C., Manchester
McNalley, Frank P., Clayton

McNalley, Michael, St. Louis
McNamara, John J., Richmond Heights
McNeel, Lee A. Jr., Greenfield
McNew, William T., Carthage
McPhee, William R., Kansas City
McPheeters, James W., Poplar Bluff
McPherson, Owen P., Grandview
McPike, Lloyd H., Joplin
McSwiney, John G., St. Louis
McVay, James R., Kansas City
McVay, James R. Jr., Kansas City
Maas, Hermann, St. Louis
Mabrey, John P., Plattsburg
Macauley, Bernard J., Poplar Bluff
MacBryde, Cyril M., St. Louis
Macdonald, William C., St. Louis
Macdonnell, Carey R., Marshfield
Macdonnell, Thomas M., Marshfield
Machek, Otakar, St. Louis
MacInnis, Florence E., Kansas City
Mack, Mary L., Address Unknown
(Member Jasper County Medical Society)
Macko, Joseph R., St. Louis
Maclean, J. Alexander, Denver, Colo.
(Member Jackson County Medical Society)
MacNaughton, Ralph E., Kansas City
MacNaughton, Robert A., Kansas City
Macnish, James M., St. Louis
Macon, William L. Jr., St. Louis
Maddox, Albert R., Sedalia
Maddox, John D., Joplin
Maddux, William P., Springfield
Madison, Waite H., Kansas City
(Member Saline County Medical Society)
Magaletta, George E., Cape Girardeau
Magee, Charles D., St. Louis
Magee, Robert L., El Dorado Springs
Magee, William E., St. Louis
Magidson, Joseph, St. Louis
Magill, Joseph S., Milan
Maginn, Richard L., St. Joseph
Magness, Guy N., St. Louis
Magness, William C., Branson
Mahe, George A., St. Louis
Maher, Robert W., Springfield
Maher, Thomas F., St. Louis
Mairs, Edgar J., Trenton
Maizus, Saul H., St. Louis
Malles, A. Conrad, St. Louis
Mandler, George, Chillicothe
Manganaro, Frank J., St. Louis
Mangels, Kenneth A., Independence
Manion, Peter J., St. Louis
Mann, James K., Kansas City
(Member Butler-Wayne-Ripley Society)
Mannis, Ben G., St. Louis
Mansur, Edward E., Miami, Fla.
(Member Cole County Medical Society)
Manting, George, St. Louis
Maple, Francis M., Springfield
Maples, Floyd H., Springfield
Marcus, Morris D., St. Louis
Margolis, Richard M., Florissant
Margulis, Alexander R., St. Louis
Marienfeld, Carl J., Columbia
Markel, Arthur D., Poplar Bluff
Marks, Mark M., Kansas City
Marmor, William A., St. Louis
Mars, Hartley F., Forsyth
Marsh, Alice, Pleasant Hill
Marshall, Alfred H., Charleston
Marshall, Cameron F., Kansas City
Marshall, Wilbur J., Springfield
Marston, Warren G., St. Louis
Martel, Dominique, St. Louis
Martin, Andrew D., Sikeston
Martin, Forrest L., Nevada
Martin, Frederick W. Jr., St. Louis
Martin, J. Barlow, St. Louis
Martin, James M., St. Louis
Martin, John N., St. Joseph
Martin, Maynard W., Houston, Tex.
(Member St. Louis Medical Society)
Martin, Raymond T., St. Louis
Martin, Wilfred E., Odessa
Martin, W. Joe, Louisiana
Martt, Jack M., Columbia
Martz, John C., Webster Groves
Masor, Nathan A., Butler
Massie, Edward, St. Louis
Masters, William H., St. Louis
Mastin, E. Vernon, St. Louis
Masucci, Joseph M., Kansas City
Mathewson, Hugh S., Kansas City
Matteson, Frank B., Grant City
Matthews, John G., St. Louis
Matthews, John I., Jefferson City
Mattis, Robert D., Clayton
Maughs, Sydney B., St. Louis
Max, Paul F., St. Louis
Maxey, Hugh W., Jefferson City
Maxson, T. Reed, Warrensburg
Maxwell, Richard W., St. Louis
May, Albert L. Jr., Poplar Bluff
May, Benjamin F., St. Louis
May, James W., Kansas City
May, Richard E., Jefferson City
Mayer, John H. Jr., Kansas City
Mayer, Robert A., St. Louis
Mayer, William D., Columbia
Mayfield, James L., Crystal City
Mays, Frank G., Washington
Maze, Lawrence E., St. Louis
Mead, Samuel T., Slater
Meador, James R., Clayton
Meagher, Arthur J., St. Louis
Medler, Francis J., St. Louis
Mehan, Donald J., St. Louis
Mehan, George T., St. Louis
Meier, Francis X., Jefferson City
Meinberg, William H., St. Louis
Meiners, Paul N., St. Louis
Meiners, Theodore M., St. Louis
Meinershagen, Charles W., Jefferson City
Meisenbach, A. Edward, St. Louis
Melgaard, S. Ross, Kansas City
Melick, William F., St. Louis
Meluney, Solomon E., St. Joseph
Menchetti, Don E., Springfield
Mendelsohn, Robert S., St. Louis
Mendelson, David F., St. Louis
Mendonsa, Elsa L., University City
Mendonsa, Lawrence E., St. Louis
Menne, Marvin G., Ironton
Merenda, Sam J., St. Louis
Meriwether, Don R., Kansas City
Merklin, Anton L., St. Louis
Merrims, Theodore, University City
Merritt, Burch A., St. Louis
Merz, Jean J., St. Louis
Mestres, Hugh M., St. Louis
Metz, Charles O., St. Louis
Meyer, Claude B., Nixa
Meyer, Curtis A., St. Louis
Meyer, Edward C., St. Louis
Meyer, Herman M., St. Louis
Meyer, James E., Manchester
Meyer, Oscar D., St. Louis
Meyer, Paul W., Kansas City
Meyerhardt, Milton H., St. Louis
Meyers, Harold L., Mission, Kans.
(Member Jackson County Medical Society)
Meyers, John B., St. Louis
Meyers, Montague M., St. Louis
Mezera, Raymond A., St. Louis
Michael, Kenneth D., St. Louis
Michael, Vernon E., St. Louis
Michaelis, Charles E., Fredericktown
Michaelree, John F., St. Louis
Middleman, Isadore C., St. Louis
Middleton, John W., Louisiana
Mier, Thomas M., St. Louis
Milano, Angelo, St. Louis
Milder, Benjamin, St. Louis
Miler, George O., Kansas City
Miles, Paul W., St. Louis
Miller, Charles Jr., Kirkwood
Miller, Charles W., St. Louis
Miller, Clinton L., Lee's Summit
Miller, Clyde S., Waynesville
Miller, D. Herbert, Montgomery, Ala.
(Member Chariton-Macon-Monroe-Randolph County Medical Society)
Miller, David V., Poplar Bluff
Miller, Gerald L., Kansas City
Miller, Harold W., Willow Springs
Miller, Howard S., Macon
Miller, James E., St. Louis
Miller, Leroy J., Columbia
Miller, Max I., Kansas City
Miller, Norman C., St. Louis
Miller, Oliver J., Cape Girardeau
(Member Perry County Medical Society)
Miller, Walter P., Kansas City
Miller, Wilson H., Kansas City
Milligan, Monti C., Campbell
Millikin, Lester A., St. Louis
Milster, Clyde R., St. Louis
Miltenberger, Paul C., Kennett
Minnihan, Robert W., Affton
Minton, Robert S., St. Joseph
Mishkin, Marvin R., St. Louis
Missey, Wilburn C. Jr., St. Louis
Mitchell, Andrew D., Kansas City
Mitchell, Robert H., Kansas City
Mitchell, Roy E., Salem
Mixson, William C., Kansas City
Modlin, John J., Columbia
Moen, Berwyn H., St. Joseph
Molden, Charles A., St. Louis
Molholm, Hans B., Little Rock, Ark.
(Member St. Louis Medical Society)
Monahan, Elmer P., Lenexa, Kans.
(Member Jackson County Medical Society)
Monat, Seymour, St. Louis
Montani, Charles, St. Louis
Montello, Samuel A., Kansas City
Montes-de-Oca, Julio, St. Louis
Montgomery, Austin F., St. Louis
Montgomery, James G., Kansas City
Moody, Jackson C., Harrisonville
Mooney, Justin L., Kansas City
Mooney, Marcel L., Kansas City
Moore, Carl V., St. Louis
Moore, Dan B., Poplar Bluff
Moore, Harry G., St. Louis
Moore, Robert A., Kansas City
Moore, Sherwood, St. Louis
Moore, Walter L., Clayton
Moore, William E., Normandy
Moranville, Benedict A., Columbia
Morehead, William E., Kennett
Morest, F. Stanley, Hollywood, Fla.
(Member Jackson County Medical Society)
Morgan, David B., Kansas City
Morgan, Harry C., St. Louis
Moriarty, Lauren R., Kansas City
Morris, Clyde L., Caruthersville
Morris, Harvey E., St. Louis
Morris, Mary E., St. Louis
Morris, William R., Kansas City
Morrison, Arlen, St. Louis
Morrison, George B., Nevada
Morrison, T. A., Aurora
Morse, Marvin, St. Joseph
Mortensen, Frede, St. Louis
Morton, Paul C., Springfield
Moseley, F. Thomas, Springfield
Moses, Robert A., St. Louis
Moss, Paul, Kansas City
Mosser, Robert S., Independence
Mothershead, John L., St. Joseph
Motzel, Albert J., St. Louis
Mountjoy, Grace S., St. Louis
Mowrey, William O., Jennings
Moyer, Carl A., St. Louis
Muckerman, Richard I. C., St. Louis
Mudd, James L., St. Louis
Mueller, Clarence E., St. Louis
Mueller, John J., St. Louis
Mueller, Joseph A., St. Louis
Mueller, Martin J., Kansas City
Mueller, Morris A., St. Louis
Mueller, Robert, St. Louis
Mueller, Robert J., St. Louis
Mueller, Wilbur K., St. Louis
Muench, Albert H., St. Joseph
Muench, Ludwig O., Washington
Muenster, Vincent P., St. Charles
Muether, Raymond O., St. Louis
Mullarky, Wilbur A., St. Louis
Mullen, Jack, Bonne Terre
Mullen, Leo M., Kansas City
Mulligan, Leo V., St. Louis
Mullinax, Orr, Marshall
Mullins, Bernard L., N. Kansas City
Multhauf, Cyril J., Mission, Kans.
(Member Jackson County Medical Society)
Mundy, Homer F., St. Joseph
Mundy, William L., Kansas City
Munsch, Augustin P., St. Louis
Munsch, Gerard A., St. Louis
Murawsky, William V., St. Louis
Murphy, Bernard L., Hannibal
Murphy, George E., St. Louis
Murphy, James P., St. Louis
Murphy, John C., St. Louis
Murphy, Paul, St. Louis
Murphy, Robert J., Kansas City
Muschany, Norman K., St. Louis
Musgrave, David E., Excelsior Springs
Musick, James D., Springfield
Mutshnick, Clara P., St. Louis
Myers, James M., Rolla
Myers, John S., Kansas City
Myers, Robert M., Kansas City
Myers, Wilson A., Kansas City

### N

Naime, Mansour J., Kansas City
Nakada, James R., St. Louis
Napper, Marvin L., Springfield
Narahara, Hiromichi T., St. Louis
Naryka, Joseph J., St. Louis
Nash, Francis P., St. Louis
Nash, George W., Kansas City
Nash, Helen E., St. Louis

Nash, Homer E. Jr., St. Louis
Nash, W. Hampton, St. Louis
Nathan, Lester J., St. Louis
Neal, M. Pinson, Columbia
Needels, Orval T., Kansas City
Neilson, Arthur W., St. Louis
Neilson, Arthur W. Jr., Victorville, Calif. (Member St. Louis Medical Society)
Nelson, Bentley A., Kansas City
Nelson, Fred L., St. Joseph
Nelson, J. Roger, Kirkwood
Nelson, James S., St. Louis
Nelson, Kenneth R., St. Louis
Nemec, Stanley S., St. Louis
Ness, Carl K., St. Joseph
Nesselrode, John H., Independence
Nester, Charles A., St. Louis
Netherton, George F., Cameron
Neu, Leo T. Jr., Springfield
Neubeiser, Ben L., St. Charles
Neun, William F., St. Louis
Neville, Edwin C., St. Louis
Newman, Mary Jane, Cassville
Newman, Percy, St. Louis
Newport, Gerald, Creve Coeur
Newton, William T., St. Louis
Nibbe, Albert F., Bethany
Nichols, Frank J., Fulton
Nickel, James F., St. Louis
Nickson, Charles E. Jr., Independence
Nicolai, Charles H., St. Louis
Nicolay, Kenneth S., Kansas City
Nicolay, William R., St. Louis
Niedermeyer, Edward L., Tarkio
Niedermeyer, George J., St. Louis
Niesen, Frank J., St. Louis
Nigh, Charles A., St. Louis
Nigro, Dominic M., Kansas City
Nigro, E. Robert, Kansas City
Nigro, Joseph A., Kansas City
Nishi, James A., St. Louis
Nishi, Toshio, St. Louis
Nix, Winston K., Marshall
Nixon, Edward E., Gallatin
Noah, Joseph W., St. Louis
Nofles, James W., St. Louis
Nolan, Charles J., St. Louis
Nolen, Jack R., Boonville
Noller, Henry W., Overland
Noltensmeyer, Milton N., Shawnee Mission, Kans. (Member Jackson County Medical (Society)
Northup, Glenn R., St. Louis
Norton, William H., St. Louis
Nuetzel, John A., St. Louis
Nunn, Pat M., Kansas City
Nunnelly, Gordon M., Cape Girardeau
Nussbaum, Paul B., Cape Girardeau
Nussbaum, Robert A., St. Louis
Nye, Robert S., St. Louis

## O

Oakley, John E., Clayton
O'Bannon, L. W. Jr., Florissant
Obermeyer, Charles G., St. Louis
O'Brien, Edward C., St. Louis
O'Brien, Harry F., Mexico
O'Brien, James A., Muskogee, Okla. (Member Jasper County Medical Society)
O'Brien, Leo A., Kansas City
O'Brien, Robert M., St. Louis
O'Connell, Frank A., Kansas City
O'Connell, Gerald L., Leawood, Kans. (Member Jackson County Medical Society)
O'Connor, Robert J., Florissant
O'Connor, William B., St. Joseph
O'Dell, Timothy T., Oran
O'Donnell, Joseph V., St. Louis
O'Dowd, James A., St. Louis
Oehler, William F., Cape Girardeau
Oetter, Donald L., St. Louis
Ogilvie, John H., Gravois Mills
Ogura, Joseph H., Ladue
O'Hearne, John J., Kansas City
Ohmoto, Masao, St. Louis
O'Keefe, Joseph D., St. Louis
O'Leary, James L., St. Louis
Olive, George C., Neosho
Oliver, George A., Farmington
Olmsted, William H., St. Louis
O'Malley, Eugene J., St. Louis
O'Malley, James F., Kansas City
O'Neal, Lawrence W., St. Louis
O'Neal, Patricia, St. Louis
O'Neil, James H., Kansas City
O'Neill, John B., St. Louis
Ongjoco, Melchor I., St. Louis
Oppenheimer, Henry E., Clayton
O'Reilly, D. Elliott, St. Louis
Orenstein, Joseph M., St. Louis
Orgel, M. Norman, St. Louis
Ortmeyer, Leroy F., St. Louis
Osborne, Charles D., Sedalia
Ossman, Julian A., Jefferson City
Ost, Mark D., Kansas City
O'Sullivan, George A., St. Louis
Ott, Harold J., Maplewood
Ottensmeyer, Charles D., Overland
Otto, Thomas G., Cape Girardeau
Overesch, Harry B., Kansas City
Overholser, Milton D., Columbia
Owen, James W. Jr., St. Louis
Owen, Robert F., St. Louis
Owens, Graham J., Kansas City
Owens, Hugh H., Kansas City
Owens, Richard L., Kansas City
Owens, Robert H., Kansas City
Ozar, Milton B., Kansas City

## P

Paddock, Charles S., Joplin
Paddock, Richard, St. Louis
Padfield, Earl G. Jr., Kansas City
Paine, Robert, St. Louis
Painter, Andrew E., Portageville
Painter, Lattie B. Jr., Portageville
Pakula, Sidney, Kansas City
Palazzo, Frank A., St. Louis
Palcheff, Chris L., Springfield
Palenske, Robert L., Hornersville
Paletta, Francis X., St. Louis
Pallett, Harold A., Kansas City
Papp, Sandor D., Joplin
Parashak, Paul M., St. Louis
Parato, John M., St. Louis
Pareira, Morton D., St. Louis
Paris, William H., St. Louis
Park, George M., Eureka
Park, William I. Jr., Springfield
Parker, Arthur C. Jr., Poplar Bluff
Parker, Brent M., St. Louis
Parker, Elmer L., Kansas City
Parker, H. Graham, Platte City
Parker, Hubert M., Kansas City
Parker, Robert H., N. Kansas City
Parker, Thomas W., University City
Parker, William, St. Louis
Parkhurst, Charles L., Houstonia
Parks, Stephen, Prairie Village, Kans. (Member Semo County Medical Society)
Parsons, Eugene O., Kansas City
Pascoe, James J., Nevada
Passanante, Bartholomew M., St. Louis
Passman, Harold, Kansas City
Pate, Otho S., N. Kansas City
Patterson, Donald R., Joplin
Patterson, Grover S., Carthage
Pawol, S. E., St. Louis
Payne, Bryan T., Lexington
Payne, John W., Columbia
Payne, Meredith J., St. Louis
Pearl, John F., St. Clair
Pearse, Roy W. Jr., Nevada
Pearson, Paul E., Mission, Kans. (Member Jackson County Medical Society)
Peck, Chester R. Jr., Kennett
Peckham, John W., St. Louis
Peden, Burnet W., Clayton
Peden, Joseph C., St. Louis
Peden, Joseph C. Jr., St. Louis
Peebles, J. B. Jr., Kirkwood
Peeler, James O., St. Louis
Peete, Don C., Kansas City
Pelz, Mort D., St. Louis
Penn, Robert M., Silex
Penner, Stanley, Kansas City
Penney, David L., St. Louis
Penninger, William H., Springfield
Pennington, Francis E., St. Louis
Pennoyer, James, Webster Groves
Perll, Maurice F., Kansas City
Perll, Rita D., Kansas City
Pernoud, Flavius G. Jr., St. Louis
Pernoud, Michael F., St. Louis
Perry, David C., Mound City
Perry, H. Mitchell, Kirkwood
Perry, John M., Princeton
Perry, Lawrence L. Jr., N. Kansas City
Perry, Ralph, Kansas City
Perry, William D., St. Louis
Peters, Evelyn L., Kansas City
Petersen, Arthur G., Kansas City
Petersen, Eugene G., Kansas City
Petersen, Harold E., St. Joseph
Peterson, Carl M., Kansas City
Peterson, Frederick D., St. Louis
Peterson, George L., Shawnee Mission, Kans. (Member Jackson County Medical Society)
Peterson, Milton C., Kansas City
Peterson, Stanley S., Springfield
Peterson, Walter R., Kansas City
Petry, Ezra L., Kansas City
Pettit, Manson B., St. Joseph
Peugnet, Hubert B., St. Louis
Pfeffer, Robert I., St. Joseph
Pfeifer, Oliver C., St. Louis
Pfuetze, Edwin L., Kansas City
Phelps, William L., St. Louis
Phillips, Hanford, St. Louis
Piccione, Leonard M., St. Louis
Pickard, Clarence M., Columbia
Pickard, Nicholas S., Shawnee Mission, Kans. (Member Jackson County Medical Society)
Pickens, E. Allen, Nevada
Pickens, Edgar E., Kansas City
Pierron, John B., Kansas City
Pifer, Lawrence H., St. Joseph
Pileggi, Felix A., N. Kansas City
Pilla, Lawrence A., St. Louis
Pingelton, William B., Columbia
Pinsker, Oscar T., Kansas City
Piper, August T., St. Louis
Piper, Donald K., Kansas City
Pipes, Keith E., Brentwood
Pipkin, Garrett, Kansas City
Pittam, Radford F., Hutchinson, Kans. (Member Jackson County Medical Society)
Platt, William R., Clayton
Platz, John H., Carrollton
Plesons, John D., St. Louis
Plowman, Edward M., Hannibal
Plumlee, John E., Columbia
Plumlee, William C., Springfield
Plumpe, W. Tupper, St. Louis
Podrecca, Guido I., Springfield
Poggemeier, William H. Jr., St. Charles
Polk, George M., Kansas City
Polk, John W., Springfield
Pollack, Maxwell A., St. Louis
Pollock, Leo H., Kansas City
Poor, Carl W., Neosho
Pope, Charles H. Jr., Independence
Popp, Carl G., Sikeston
Porporis, Arthur A., St. Louis
Porter, Louis, Kansas City
Porter, Russell C., Tucson, Ariz. (Member Clay County Medical Society)
Porterfield, John F., Columbia
Portuondo, Bonaventura C., St. Louis
Post, Cyril A., Poplar Bluff
Post, John P., Washington
Post, M. Hayward, St. Louis
Post, Winfred L., Joplin
Potashnick, Robert, St. Louis
Potter, Allen B., Bowling Green (Member St. Louis Medical Society)
Potter, Caryl A. Jr., St. Joseph
Potter, Lee G., Kansas City
Potter, Reese H., St. Louis
Potter, Thompson E., St. Joseph
Powell, Carl A., St. Louis
Powell, Charles B., Florissant
Powell, Earl A., St. Louis
Powell, Edwin M., Springfield
Powell, Nelson E., Kansas City
Powell, Robert G., Joplin
Powers, John M., Kansas City
Powers, Pierce W., St. Louis
Pozsgay, Michael S., St. Louis
Pranger, Sylvester H., St. Louis
Prater, Bill G., Springfield
Prentiss, Harry S., Kansas City
Presnell, Cleitus A., St. Louis
Press, Maurice J., St. Louis
Preston, Albert Jr., Kansas City
Price, Charles H., Cassville
Price, Kenneth C., St. Louis
Price, Robert P., St. Joseph (Member Callaway County Medical Society)
Printz, Joseph H., Kansas City
Printz, Otto J., Kansas City
Probstein, Jacob G., St. Louis
Proctor, Donald C., Sedalia
Proetz, Arthur W., St. Louis
Pruett, Burchard S., St. Louis
Pruett, Hubert S., St. Louis
Pruett, Paul L., Springfield
Pucci, Gregory L., Kansas City
Puckett, Cordelia, St. Louis
Pugh, Richard G., Independence
Purcell, Harry K., New Delhi, India (Member St. Louis Medical Society)

Purcell, P. L., Hull, Ill.
(Member Marion-Ralls-Shelby County Medical Society)
Purkerson, Mabel L., St. Louis
Pyne, Herbert S., St. Louis

### Q

Quer, Erich A., Kansas City
Quistgard, Paul C., Kansas City

### R

Rachlin, Maxwell, Brentwood
Rader, Ada B., Martin City
Rader, George B., St. Louis
Raemdonck, Alphonse J., St. Louis
Ragland, John E., Ballwin
Ragsdale, George M., Paris
Rainey, Robert, St. Louis
Rainwater, Elmer H., Springfield
Rall, Kenneth L., Columbia
Ramey, Ehret O., Kansas City
Ramos, John F. Jr., Kansas City
Ramos, Raoul L., St. Louis
Ramsey, Robert H., Ferguson
Randall, Don Q., St. Charles
Randolph, Andrew J., Kansas City
Rannie, Paul R., Independence
Ransdell, James F., Carmichael, Calif.
(Member Boone County Medical Society)
Rapp, Earl L., Hannibal
Rapp, Harold B., Cape Girardeau
Rappold, H. O., St. Louis
Rawlins, Fred E., Cape Girardeau
Rawlins, Kelly, Holden
Ray, C. Thorpe, Columbia
Ready, James H., Florissant
Reas, Herman W., St. Louis
Rector, Joe L. Jr., Kansas City
Redington, James C. Jr., Clayton
Redington, John V., St. Louis
Redmond, William, St. Joseph
Reeder, Charles C., New Madrid
Reese, A. Victor, St. Louis
Reh, Edward P., St. Louis
Reich, Harry A., St. Louis
Reich, Oliver F., Kimmswick
Reichert, M. Cecelia, St. Louis
Reiches, Aaron J., St. Louis
Reid, James A., Marshall
Reid, William F., Richmond, Va.
(Member St. Louis Medical Society)
Reider, Richard A., St. Louis
Reilly, Leo J., St. Louis
Reilly, Pierce J., St. Louis
Reineck, John A., St. Louis
Reinhard, Edward H., St. Louis
Reinhardt, George R., Kansas City
Reis, Carl J., St. Louis
Reiss, Eric, University City
Reister, Dorothy D., Kansas City
(Member St. Louis County Medical Society)
Reister, Philip D., Kansas City
Reitman, Stanley, St. Louis
Reitz, Carl H., Kansas City
Remley, George C., Kansas City
Rendleman, George F., St. Louis
Rennard, Marvin, St. Louis
Repetto, Albert M., St. Louis
Repp, Theodore J., St. Louis
Reuter, Louis A., St. Louis
Revare, Paul, N. Kansas City
Reynolds, Clarence C., Kansas City
Reynolds, Fred, St. Louis
Reynolds, Garland A., Cape Girardeau
Reynolds, James R., Neosho
Rhoades, Arthur B., Kansas City
Rhodes, Euhlan L., Warsaw
Rice, Carl E., Hillsboro
Rice, Earl R., Fort Lauderdale, Fla.
(Member St. Louis Medical Society)
Rice, Grover C., Brunswick
Richards, Frank O., St. Louis
Richards, William R., St. Louis
Richardson, George A., Union
Richardson, Marion W., Kansas City
Richardson, Reginald G., Jefferson City
Richardson, William R., Union
Richert, Robert C., Kansas City
Richman, Elmer, St. Louis
Richter, William B., Stockton
Riddell, Richard V., St. Joseph
Ridings, Harold D., Cape Girardeau
Ries, Douglas A., St. Louis
Riffel, Gordon W., Bourbon
Rifkin, Shale M., St. Louis
Riggio, Salvatore N., St. Louis
Rigney, Levi M., Springfield
Riley, Charles T., Richmond
Riley, John J., St. Louis
Riley, Ralph D., St. Louis
Riley, Ralph W., Lexington
Riley, William H., St. Louis
Riller, Lowell E., Kansas City
Rinck, Edward C., Nevada
Ringo, Henry J., St. Louis
Rinkel, Herbert J., Kansas City
Rinker, Carl T. Jr., Macon
Riordan, Lawrence M., St. Louis
Ripley, C. E., Poplar Bluff
Ritchie, Frances R., St. Louis
Ritter, Hubert A., St. Louis
Ritter, Paul J., St. Louis
Ritter, Raymond A., Cape Girardeau
Ritterbusch, James K., Fulton
Roark, Glenn E., Columbia
Roberts, Grosvenor G., Kansas City
Roberts, Harold K., Clayton
Roberts, Harold M., Kansas City
Roberts, John P., Kirkwood
Roberts, John R., St. Louis
Roberts, L. Marvin, Kansas City
(Member Clay County Medical Society)
Roberts, Paul A., Sweet Springs
Roberts, Sam E., Kansas City
Robertson, Frank G., St. Louis
Robertson, LeRoy L., St. Louis
Robertson, Robert C., Fulton
Robertson, William D., Poplar Bluff
Robertson, William D., Kansas City
Robichaux, Eugene B., Excelsior Springs
Robins, Eli, St. Louis
Robinson, Arthur W., Kansas City
Robinson, Edith C., St. Louis
Robinson, Edward E., Adrian
Robinson, E. Kip, Kansas City
Robinson, George G., Humansville
Robinson, G. Wilse Jr., Kansas City
Robinson, John A., Edgerton
Robinson, William J., Leawood, Kans.
(Member Jackson County Medical Society)
Robison, James T. Jr., Kansas City
Roblee, Melvin A., St. Louis
Roche, Maurice B., St. Louis
Rodeman, John M., Sedalia
Rodes, Ned D., Mexico
Rodgers, Elrie P., Columbia
Rodgers, George H., Kansas City
Rodgers, Samuel U., Kansas City
Roe, Allen N., Berger
Roebber, Harry M., Bonne Terre
Roehrs, Marvin E., Marshall
Rogers, Cyril H., St. Louis
Rogers, John A., St. Louis
Rogers, John T., St. Joseph
Rohlfing, Edwin H., St. Louis
Rohlfing, Walter H., St. Louis
Roller, Merrill J., Hannibal
Rollins, Harry D., Winona
Rolufs, Lloyd S., Kirkwood
Rolwing, E. Charles, Charleston
Ronald, Douglas C., Butler
Roodman, Herman J., Clayton
Roos, Albert, St. Louis
Roper, Charles L., St. Louis
Roper, Stanley D., Ozark
Rose, Charles W., Kansas City
Rose, Dalton K., St. Louis
Rosecan, Marvin, St. Louis
Rosen, Charles S., St. Louis
Rosen, Max, Springfield
Rosenbaum, Harry D., St. Louis
Rosenbaum, Herbert E., St. Louis
Rosenberg, Henry E., St. Louis
Rosenfeld, Henry, St. Louis
Rosenstein, Daniel L., St. Louis
Rosenthal, Irwin I., St. Joseph
Ross, Herman C., Brentwood
Rost, William B., St. Joseph
Roter, Alexander M., St. Charles
Roth, Daniel, St. Louis
Roth, John J., St. Louis
Rother, Paul H., St. Charles
Rothman, David, St. Louis
Rothweiler, Robert J., St. Louis
Roufa, Joseph F., St. Louis
Roulhac, George E., St. Louis
Rouse, David M., Mexico
Rouse, Ernest T., St. Louis
Rowlette, Avery P., Moberly
Roy, Joseph A., Jennings
Royce, James J., Sarcoxie
Royce, Robert K., St. Louis
Royse, Roy P., Sullivan
Royston, Grandison D., Hope, Ark.
(Member St. Louis Medical Society)
Rubenstein, Melvin, St. Louis
Rubin, Robert, St. Louis
Rubin, Sidney, Kansas City
Rubnitz, Leon H., Kansas City
Ruddell, George W., St. Louis
Rudi, Herbert J., St. Louis
Rufe, John R., Kansas City
Ruff, T. Eugene, Poplar Bluff
Ruhling, Rudy, St. Louis
Rusk, Earl M., Jefferson City
(Member Callaway County Medical Society)
Russell, Barbara E., Rolla
Russell, Earl D., Springfield
Russell, James L., Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Russell, Joseph P., Jefferson City
Russell, Richard L., Kansas City
Russell, Robert K., Raytown
Rutledge, John F., Festus
Rutledge, William J., Campbell
Ryan, John B., Washington
Ryan, John H., St. Joseph
Ryan, John J., Clayton
Ryan, Robert E., St. Louis

### S

St. John, Thomas C., St. Louis
Sachar, Leo A., St. Louis
Saferstein, A. Lester, Kansas City
Sala, Jose M., Columbia
Saladino, Anthony, Kansas City
Sale, Llewellyn, St. Louis
Sale, Llewellyn Jr., St. Louis
Salisbury, William J., St. Louis
Saltzstein, Sidney, St. Louis
Sammons, Harry C., St. Louis
Sample, George A., Chaffee
Samuelson, Edward A., Kansas City
Sanders, George E., Excelsior Springs
Sanders, Harmon U. Jr., Independence
Sanders, J. S., Jefferson City
Sanders, Robert D., St. Louis
Sanders, Theodore E., St. Louis
Sanders, William F., Kansas City
Sandy, Charles, Prairie Village, Kans.
(Member Cooper County Medical Society)
Sante, Leroy R., St. Louis
Santiago, Miguel, St. Louis
Santoro, Carlos G., Prairie Village, Kans.
(Member Jackson County Medical Society)
Saper, Philip, Lee's Summit
Sargent, Alden P., Sikeston
Sargent, John P., Sikeston
Sarno, Samuel M., Morehouse
Sato, George, St. Louis
Satterfield, Val B., Chesterfield
Sauer, Gordon C., Kansas City
Sauer, W. Nicholas, St. Louis
Saunders, Everett L., Independence
Sawyer, Floyd E., N. Kansas City
Sawyer, James, St. Louis
Scanlon, Robert C., Springfield
Scarpellino, Louis, Kansas City
Schaan, Robert C., St. Louis
Schaefer, George J., St. Louis
Schaefer, Glennon S. Jr., St. Louis
Schaerer, Jacques P., St. Louis
Schaerrer, Hans, Kansas City
Schaerrer, William C., Kansas City
Schaper, Ernest H., St. Louis
Schattyn, Martyn, St. Louis
Schupmann, Gustav A., St. Louis
Schechter, Samuel E., St. Louis
Scheele, Paul M., St. Louis
Scheer, George E., St. Louis
Scheff, Harold, St. Louis
Scherman, Victor E., St. Louis
Schertz, Truman B., N. Kansas City
Scheuber, Charles, Columbia
Schewe, A. Craig, St. Louis
Schewe, Elmer J. Jr., Columbia
Schierman, William D., Clayton
Schiffmacher, Jack E., Kansas City
Schillie, Gene A., Kansas City
Schlansky, Seymour M., St. Louis
Schlenker, Lawrence, St. Louis
Schluer, Elmer P., St. Louis
Schmidt, Charles A., Gerald
Schmidt, Edwin H., St. Louis
Schmidt, Edmund M., St. Louis
Schmidt, Herbert H., Washington
Schmiemeier, Roy H., St. Louis
Schmitz, Edgar F., St. Louis
Schneider, Oscar, St. Louis
Schneider, Sam., St. Louis
Schneider, Vincent A., St. Charles
Schnoebelen, Paul C., St. Louis
Schoeberl, Cletus B., Joplin
Schoentag, John S., St. Louis
Schopp, Alvin C., St. Louis
Schorer, Edwin H., Kansas City

Schottman, Gerhard W. Jr., Kansas City
Schranck, Charles R., St. Louis
Schrepel, Herbert O., St. Louis
Schroeder, Henry A., St. Louis
Schroff, Carle H., Springfield
Schulte, Gregory A., Joplin
Schultz, Loraine E., Branson
Schultz, Samuel, St. Louis
Schuman, Stanley H., Ann Arbor, Mich.
(Member St. Louis County Medical
Society)
Schutz, Carl B., Kansas City
Schutz, Richard B., Kansas City
Schwartz, Eugene J., Springfield
Schwartz, Frederick O., St. Louis
Schwartz, Henry G., St. Louis
Schwartz, John T., Columbia
Schwartz, Melvin M., St. Louis
Schwartzman, Bernard, St. Louis
Schwarz, Ralph C., Cincinnati, Ohio
(Member St. Louis Medical Society)
Schweiss, John F., St. Louis
Schweitzer, Fred C. Jr., Springfield
Sciortino, Gaspare, St. Louis
Sciortino, John S., St. Louis
Scopelite, Joseph A., St. Louis
Scorse, Sidney W., Joplin
Scott, Clive D., Louisiana
Scott, Elwin P., St. Louis
Scott, Wendell G., St. Louis
Seabaugh, D. Rusby, Cape Girardeau
Seabaugh, Dayton I. L., Jackson
Seabaugh, Loy R., Cape Girardeau
Seabaugh, Oda L., Cape Girardeau
Seabaugh, Ottis D., Webster Groves
Seabaugh, William O. L., Cape Girardeau
Seabold, John A., University City
Seddon, John W., St. Louis
See, William B., Columbia
Seeley, James B., Blue Springs
Seeley, James J., St. Louis
Seely, Clark W., Kansas City
Seib, George A., St. Louis
Seidel, Donald R., St. Louis
Senn, Emmett J., Herculaneum
Senne, Herbert C., St. Joseph
Sennott, John S., Jefferson City
Senor, Samuel E., St. Joseph
Senturia, Ben H., St. Louis
Senturia, Hyman R., St. Louis
Serkes, Kenneth D., St. Louis
Sertl, John D., St. Louis
Sevastianos, Aristides E., St. Louis
Sevin, Omar R., Rockhall, Md.
(Member St. Louis Medical Society)
Sewell, Minor F., Kansas City
Sewell, Walter S., Springfield
Sewing, Arthur H., St. Louis
Sexton, Daniel L., St. Louis
Sexton, Elmer E., St. Louis
Shackelford, Horace H., St. Louis
Shahan, Philip T., St. Louis
Shaner, John F., St. Louis
Shank, Robert E., St. Louis
Shapiro, Lazare M., Kansas City
Shapleigh, John B., St. Louis
Sharp, Austin R., St. Louis
Shatz, Burton A., St. Louis
Shaw, Carvel T., Hermann
Shaw, Gordon, Mexico
Shaw, William J., Fayette
Shaw, William J. Jr., Fayette
Shea, James G., Gerald
Sheahon, John A., Kansas City
Shecter, Nathan, Kansas City
Sheets, John S., St. Louis
Sheets, Martin E., Chesterfield
Sheldon, Russell D., Kansas City
Sheldon, John, Kansas City
Shelton, Edward O., Eldon
Shen, Jerome T. Y., St. Louis
Shepherd, Phillip M., El Dorado Springs
Sheppard, Lee C. Jr., San Diego, Calif.
(Member Boone County Medical
Society)
Sherard, Julius C., St. Louis
Sheridan, Edmund R., St. Louis
Sherman, Alfred I., St. Louis
Sherry, Sol, St. Louis
Sherwin, Charles S., St. Louis
Shevlin, Charles F., St. Joseph
Shieber, William, St. Louis
Shifrin, Alexander, Kansas City
Shireman, Kenneth L., Kansas City
Shires, Edward B., Leawood, Kans.
(Member Jackson County Medical
Society)
Shirey, Arnold G., Hayti
Shobe, Frank O., St. Louis
Shockley, Clarence J., Kansas City
Shofstall, Charles K., Kansas City
Shoss, Milton, Cape Girardeau
Shreffler, Algie R., Tavernier, Fla.
(Member St. Louis Medical Society)
Shrout, Cecil B., Bunceton
Shuey, Herbert H., Kansas City
Shull, George D., Jefferson City
Shuman, Joseph S., St. Louis
Shumate, L. St. Clair, Reeds Spring
Shutt, Cleveland H., St. Louis
Shyken, Herman, St. Louis
Shypper, Moses J., Kansas City
Siceluff, Joseph G., Springfield
Siegel, Carl D., Sedalia
Siegel, Peter V., Smithton
Siemers, George E., St. Louis
Sierra, Gregorio, Belleville, Ill.
(Member St. Louis Medical Society)
Siesener, Herbert H., St. Louis
Sievers, Edward F., Miami Beach, Fla.
(Member St. Louis Medical Society)
Sights, Warren P. Jr., Columbia
Signorelli, Andrew J., St. Louis
Silsby, Don H., Springfield
Silsby, Don J., Springfield
Silsby, Harry D., Springfield
Silverberg, Charles, St. Louis
Silvermintz, Saul D., Ladue
Simmons, Charles R., Windsor
Simms, Otho M., St. Charles
Simon, Bettie H., St. Louis
Simon, David L., St. Louis
Simon, Jerome I., St. Louis
Simon, Nathan M., Clayton
Simon, Sanford, Shawnee Mission, Kans.
(Member Jackson County Medical
Society)
Simon, Selig, St. Louis
Simpson, Albert P., Springfield
Simpson, Eber, St. Louis
Simpson, Emerson L., Springfield
Simpson, Guy L., St. Louis
Simpson, Lloyd, Columbia
Simril, Wayne A., Clayton
Sinclair, Alexander B., Kansas City
Sisk, James C., St. Louis
Sisson, Richard G., St. Louis
Skeffington, Mary Jane, St. Louis
Skilling, David M. Jr., St. Louis
Skillman, Robert K., Shawnee Mission,
Kans.
(Member Jackson County Medical
Society)
Skinner, John O., Kansas City
Skinner, John S., St. Louis
Skinner, John T., Kansas City
Sklenar, Donald E., St. Joseph
Slaughter, Shelby C., Fredericktown
Slentz, Edwin L., Kansas City
Slentz, William A., Kansas City
Slickman, Robert A., Kansas City
Small, Walter L., Kansas City
Smart, Leon A., St. Louis
Smathers, John H., Troy
(Member St. Louis Medical Society)
Smiley, William, St. Louis
Smit, Herbert M., St. Louis
Smith, Arthur A., St. Louis
Smith, Arthur B., Kansas City
Smith, Audra B., Sikeston
Smith, Benjamin F. Jr., St. Louis
Smith, C. Souter, Springfield
Smith, Carl C., Moberly
Smith, Clifton, St. Joseph
Smith, Dale C., Kansas City
Smith, Frank J., St. Louis
Smith, Garland F., St. Louis
Smith, George E., Kirkwood
Smith, Grafton A., Columbia
Smith, Harvey S., Springfield
Smith, Herbert P., St. Louis
Smith, Hubert E., Kansas City
Smith, Hugh R., St. Louis
Smith, Ira T., Kansas City
Smith, J. Earl, St. Louis
Smith, James O., Clinton
Smith, Jason N. Jr., Columbia
Smith, Joe R., Columbia
Smith, John R., St. Louis
Smith, Kathleen, St. Louis
Smith, Milton, St. Louis
Smith, O. D., Mission, Kans.
(Member Jackson County Medical
Society)
Smith, Robert M., St. Louis
Smith, Robert S., Portageville
Smith, Robert W., Marceline
Smith, Roland T., Joplin
Smith, Rollin H., West Plains
Smith, Sidney E., St. Louis
Smith, Ulysses S., Hannibal
Smith, Wallace B., Independence
Smith, William A., Somerton, Ariz.
(Member St. Louis County Medical
Society)
Smith, William J., Hannibal
Smith, William J., Windsor
Smith, William R., Carthage
Smolik, Edmund A., St. Louis
Snead, William H. Jr., Springfield
Sneid, Philip, Kansas City
Snider, Samuel H., Kansas City
Snyder, Edward N., St. Louis
Sommer, Conrad, St. Louis
Sommer, Ross B., St. Louis
Soule, Samuel D., St. Louis
Spafford, Allen L., Kansas City
Spalding, Wilber B., Plattsburg
Spears, Charles A., Branson
Spears, Joe L., Cabool
Spelman, Archibald E., Smithville
Spence, Elbert L., Kennett
Speno, Angelo A., St. Louis
Spinzig, Edgar W., Kirkwood
Spitz, Milton A., Milwaukee, Wis.
(Member St. Louis County Medical
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Spitzer, Ernest, University City
Spoeneman, Marlin C., St. Louis
Spoenemann, Walter H., St. Louis
Sportsman, Weldon L., Kansas City
Spratt, John S. Jr., Columbia
Spurgeon, Milo J., Columbia
Spurny, Otto M., Kansas City
Stacy, Wallace R., Independence
Stacy, Winton T., St. Joseph
Staehle, Melvin E., St. Louis
Staggs, William A., Kansas City
Staley, Harry R., Kansas City
Stallard, Donald J., St. Joseph
Stamp, Warren C., St. Louis
Stansbrough, Raymond A., St. Louis
Starke, Helen (Sister Paula Theresa),
Kansas City
Starkloff, Gene B., St. Louis
Starkloff, Max, St. Louis
Statland, Harry, Kansas City
Statland, Morris, Kansas City
Staton, R. Hamilton, Carrollton
Stauffacher, C. Gordon, Sedalia
Stauffer, Harry B., Jefferson City
Steele, Charles W., Kansas City
Steele, Jack T., St. Louis
Stelle, James C. Jr., Hannibal
Steffen, Lawrence F., Kansas City
Stegman, Elmer G., Raytown
Stein, Arthur H. Jr., St. Louis
Stein, Harry J., St. Louis
Stein, Joseph W., Kansas City
Stein, Leonard A., St. Louis
Steinbeck, Herbert D., Union
Steinbeck, Herbert F., St. Louis
Steinberg, Franz U., St. Louis
Steiner, Alexander J., St. Louis
Stelmach, Walter J., Kansas City
Stephan, August P., Jefferson City
Stephens, LeRoy J., St. Louis
Stephens, Louis F., St. Louis
Stephens, William A., St. Louis
Stephenson, Hugh E. Jr., Columbia
Stergen, Nick E., St. Louis
Sterkel, Richard L., St. Louis
Sterling, Charles E., St. Louis
Sterling, John A., Maplewood
Stevens, Robert W., St. Louis
Stevens, W. R., Kansas City
Stewart, Floyd, St. Louis
Stewart, Frances H., St. Louis
Stewart, John W., St. Louis
Stewart, Robert B., Springfield
Stewart, Robert H., Sedalia
Stewart, R. Wendell, Springfield
Stewart, Wendell K., St. Louis
Stewart, William J., Columbia
Stickle, Arthur W., St. Louis
Stickler, Ralph O., Kirksville
Stindel, Charles E., St. Louis
Stocking, Lyman C., St. Louis
Stockton, Raymond W., Kansas City
Stockwell, A. Lloyd, Kansas City
Stokes, James M., St. Louis
Stolar, Jacob, St. Louis
Stone, Charles A., St. Louis
Stoneman, William III, St. Louis
Stotts, Charles S., Prairie Village, Kans.
(Member Jackson County Medical
Society)
Stratemeier, Edward H., Kansas City
Strauchen, Gilbert W., St. Louis
Strauss, Arthur E., St. Louis
Streetor, Roderick D., St. Louis
(Member Chariton-Macon-Monroe-
Randolph County Medical Society)
Strehlman, Benjamin G., Union

Stricker, Emil A., St. James
Stricker, Harold C., Jefferson City
Strittmatter, James C., Caruthersville
Strominger, Donald B., St. Louis
Strong, Richard M., Hannibal
Stryker, Garold V., St. Louis
Stryker, William I., St. Louis
Stuart, Byron M., Boonville
Stuart, Daniel D., Brunswick
Stuart, Wallace, Manchester
Stude, William C., St. Louis
Stuebner, Roland W., St. Louis
Sturtevant, Harwood N., Springfield
Stutsman, Albert C., St. Louis
Suba, Antonio R., St. Louis
Sudholt, Alfred F. Jr., St. Louis
Sugarbaker, Everett D., Jefferson City
Suggett, Finis C., Columbia
Sullivan, B. Hazard, Miami
Sullivan, Clement J., St. Louis
Sullivan, James F., Omaha, Nebr.
(Member St. Louis Medical Society)
Sullivan, William J., Providence, R. I.
(Member North Central Counties
Medical Society)
Sultzman, Francis E., Hannibal
Summers, Caldwell B., Kansas City
Summers, Jacob H., Lebanon
Summers, John B., St. Louis
Summers, Joseph S. Jr., Jefferson City
Summers, Thomas F., St. Louis
Sunderman, Raymond C., St. Louis
Sundstrom, Frank D., Springfield
Sunshine, Herbert, St. Louis
Susman, Irvin C., St. Louis
Susman, Noah, Columbia
Sutherland, Gladys P., Bethany
Sutphin, John B., St. Louis
Sutter, Richard A., St. Louis
Swafford, Owen J. Jr., Senath
Swarm, Richard L., Bethesda, Md.
(Member St. Louis Medical Society)
Sweany, Henry C., Mount Vernon
Sweet, Herbert C., Webster Groves
Sweets, Henry H. Jr., Hannibal
Sweiger, James H., Maysville
Swekosky, Frank J., St. Louis
Swisher, Robert C., Kansas City
Switzer, Clyde, Merriam, Kans.
(Member Jackson County Medical
Society)
Swope, Joseph A., St. Louis
Sydow, Henry A., Fulton
Szabados, Ernest D., Independence
Szymanski, Stanley R., Moberly

### T

Tadlock, Baxter W., St. Joseph
Tahir, Mohammad, St. Joseph
Talbott, Hudson, Louisville, Ky.
(Member St. Louis Medical Society)
Tanaka, George M., St. Louis
Tanner, Robert H., Jefferson City
Tapper, Stephen M., St. Louis
Tarrasch, Ernest L., Springfield
Tarson, Solomon S., Kansas City
Tarver, Quinton, Kennett
Tarvydas, Francis, Edina
Tashma, Sigmund, St. Louis
Tasker, Charles B., Kansas City
Tate, Lloyd L., St. Louis
Taussig, Barrett L., St. Louis
Taylor, Eugene D., St. Louis
Taylor, Eugene T., St. Louis
Taylor, Helen L., St. Louis
Taylor, Leo T., Neosho
Taylor, Leon A., Jefferson City
Taylor, Van W., Bonne Terre
Taylor, William E., Springfield
Teall, Raymond E., Kansas City
Teare, Max E., Kansas City
(Member Buchanan County Medical
Society)
Teiber, Frederick W., St. Louis
Tellez, Edward R., Fulton
Ternberg, Jessie L., St. Louis
Terrill, Robert S., Kansas City
Tess, Melvin J. H., St. Louis
Tesson, James A., Kansas City
Thale, Thomas, St. Louis
Theel, Otto W. Jr., Kansas City
Thiele, Belmont R., St. Louis
Thiele, George H., Shawnee Mission,
Kans.
(Member Jackson County Medical
Society)
Thiele, O. K., St. Charles
Thoma, George E. Jr., St. Louis
Thomas, Charles S., St. Louis
Thomas, Christopher Y., Kansas City
Thomas, Forrest, St. Joseph
Thomas, Horace E., Columbia
Thomasson, David D., Springfield
Thomasson, Mary W., University City
Thomasson, Robert E., St. Louis
Thompson, Charles L., Kansas City
Thompson, Emma A. B., Columbia
(Member Grand River Medical Society)
Thompson, F. Gregg Jr., St. Joseph
Thompson, F. Gregg III, St. Joseph
Thompson, Ian M., Columbia
Thompson, J. William, St. Louis
Thompson, Lawrence D., St. Louis
Thorn, Druery R., Kansas City
Threadgill, Jesse M., Forsyth
Throgmorton, Howard B., Sikeston
Thurber, Claude M., Windsor
Thurman, Hill C., Parkville
Thym, Henry P., St. Louis
Tibbs, William A. Jr., St. Louis
Tice, Wayne K., Independence
Tichenor, Robert W., St. Louis
Tietjen, Frederick O., Jefferson City
Tiffany, D. E., Mountain View
Tillman, Walter W. Jr., Springfield
Tindall, Robert N., St. Louis
Tinsley, John C. Jr., Columbia
Tippett, Jack C., St. Louis
Titmarsh, J. B. Jr., Bethany
Titterington, Paul F., St. Louis
Tjoflat, Oliver E., St. Louis
Tobias, Norman, St. Louis
Todd, Thomas B., Nevada
Tombridge, Thomas L., Springfield
Tomlinson, William L., St. Louis
Tonelli, George L., St. Louis
Tooker, Charles W., St. Louis
Torin, Bernice A., University City
Towers, Orville W., St. Charles
Townsend, James A., Clayton
Townsend, Vincent F., Clayton
Tracy, Herbert A., Belton
Tracy, Terry E., Belton
Treiman, Robert C., St. Louis
Tremain, Ernest E., Maplewood
Tremain, Irl G., St. Louis
Tribble, Robert E., Chaffee
Trigg, Joseph F., St. Louis
Tripodi, Anthony M., Tacoma, Wash.
(Member St. Louis Medical Society)
Trippe, Harrison C., Kansas City
Triska, Roland A., St. Louis
Trotter, Francis O. Jr., St. Louis
Trotter, W. Yates, Springfield
Trowbridge, Barnard C., Kansas City
Trowbridge, Ellsworth H., Prairie Village,
Kans.
(Member Jackson County Medical
Society)
Trowbridge, Ellsworth H. Jr., Kansas City
Trueblood, Alva C. Jr., St. Louis
Trugly, Edith S., St. Louis
Trunko, Leo, Lemay
Tsang, John L. K., Springfield
Tucker, Eugene F., St. Louis
Tureen, Louis L., St. Louis
Turner, Glenn O., Springfield
Turner, James H., Poplar Bluff
Turner, James K., St. Louis
Turner, Percy C., Kansas City
Turner, Rush, St. Louis
Turner, William F., Poplar Bluff
Tutera, Dominic F., Kansas City
Tuthill, Herbert, Kansas City
Twedell, Donald L., St. Louis
Twin, Edward J., Kansas City
Twyman, Richard A., Kansas City
Tygett, Glenn J., Cape Girardeau

### U

Uhlemeyer, Henry A., St. Louis
Ulett, George A., St. Louis
Ulett, Pearl C., St. Louis
Underwood, Dick H., Kansas City
Underwood, Harry A., Kansas City
Underwood, Johnson Jr., Kansas City
Underwood, Millard K., Rolla
Underwood, Ross H., Kansas City
Unger, Harold, Kansas City
Ungvari, Joseph C., St. Louis
Upshaw, Paul O., Springfield
Upsher, Albert E., Kansas City
Urban, Edgar D., Sikeston
Utley, James H., St. Louis
Utterman, William F., Perryville

### V

Vacca, Joseph B., St. Louis
Vail, A. Denton, Springfield
Valach, Frank J., Brentwood
VanBiber, James T., Independence
Van Buskirk, Terrance E., Kansas City
Van Buskirk, William C., Kansas City
Van Cleve, John D., Malden
Vandiver, Virgil D., Chillicothe
Vandover, John T., St. Louis
Van Matre, R. M., Washington, D. C.
(Member St. Louis Medical Society)
Van Norman, Robert T., St. Louis
Van Peenen, Hubert J., Columbia
Vatterott, Paul B., St. Louis
Vaughan, J. Russell, St. Louis
Vaughn, Arthur N., St. Louis
Vaughn, James W., Kansas City
Venable, H. Phillip, St. Louis
Verda, Dominic J., St. Louis
Vermillion, Crofford O., St. Louis
Vescovo, Paul C. Jr., Smithville
Vest, James C., St. Louis
Vezeau, Stephen, St. Louis
Vilmer, Charles, Kansas City
Vincent, Jack C., Kansas City
Vinyard, Jack L., Carrollton
Vinyard, Paul, St. Louis
Virant, John A., St. Louis
Virden, Herbert H., Kansas City
Vitale, Anthony J., St. Louis
Vitale, Nicholas S., St. Louis
Vitt, Alvin E., St. Louis
Vitt, Edwin F., St. Louis
Viviano, Joseph G., St. Louis
Vizgird, Joseph J., St. Louis
Vogel, Eugene A., St. Louis
Vohs, Carl F., St. Louis
Vollmar, Clarence J., Webster Groves
Von Kaenel, Joseph E., St. Louis
Votaw, Robert E., St. Louis
Voth, Harold W., Kansas City
Vournas, Christopher G., St. Louis

### W

Wacker, Leo L., St. Louis
Waddle, Kenneth E., Springfield
Waddell, Theodore L., Dexter
Wade, Frederick E., Kansas City
Wade, James P., St. Louis
Wadlow, Ernest E., St. Joseph
Wagenbach, William F., St. Louis
Waggoner, Charles M., Columbia
Waggoner, Sharon E., St. Joseph
Wakefield, Elmer G., Springfield
Wakefield, Franklin H. Jr., Kansas City
Wakeman, Jasper N., Springfield
Wald, Stanley M., St. Louis
Walker, Ambrose T., Mammoth Spring,
Ark.
(Member South Central Counties
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Walker, George S., Clinton
Walker, Harvey Jr., University City
Walker, Hugh B., Clinton
Walker, James C., Kansas City
Walker, John W., Kansas City
Walker, Orville C. Jr., Independence
Walker, Paul W., Joplin
Walker, Willard B., Clayton
Walker, William M., Springfield
Wall, Albert, St. Louis
Wall, Arthur H., Sierra Madre, Calif.
(Member Jackson County Medical
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Wall, Emmett D., St. Louis
Wall, Harry C., Kansas City
Wall, Joe A., Houston
Wall, Leonard A., Kansas City
Wallace, Edgar S., Mexico
Wallace, Hilen K., St. Joseph
Walsh, James W., St. Louis
Walsh, Theodore E., St. Louis
Walsh, Thomas J., St. Louis
Walsh, William T., Morgantown, W. Va.
(Member Greene County Medical
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Walter, Kenneth E., St. Louis
Walters, Harold E., St. Louis
Walters, John H., Columbia
Walters, Laura, Columbia
Walters, William H., St. Louis
Walterscheid, John H., Hannibal
Walther, Roy A. Jr., St. Louis
Walton, Franklin E., St. Louis
Walton, Marion C., Mountain View
Waltrip, Roy T. Jr., Sikeston
Wanamaker, John M., Rock Port
Ward, Joe, Lexington
Ward, Robert L., Centralia
Ward, Robert L., Kansas City
Warner, George K., Kirkwood
Warner, Robert G., St. Louis
Warren, T. Thomas, Fredericktown

Warres, Herbert L., St. Joseph
Washburn, J. Loren, Versailles
Washington, Edward L., Columbia
Wasserman, Helman C., St. Louis
Waterman, Franklin M., Liberty
Waters, E. Burton, Kirkwood
Waters, Hugh R., St. Louis
Watkins, George L. Jr., Farmington
Watson, Cecil L., Kahoka
Watson, Ethel, Independence
Wattenberg, Carl A., St. Louis
Watts, Byron E., Jefferson City
Waxman, David, Kansas City
Waxman, Jane Z., Kansas City
Wayland, Thomas A., Camdenton (Member Cole County Medical Society)
Webb, Leslie R. Jr., Springfield
Webb, Marion A., St. Louis
Webb, Paul B., St. Louis
Webb, Paul B. Jr., St. Louis
Webb, Paul K., St. Louis
Weber, Eugene P., St. Louis
Weber, J. R., St. Louis
Weber, Sol, St. Louis
Weber, William K., Bridgeton
Webster, Joseph G., Kansas City
Webster, Roger W., Hayward, Calif. (Member Jasper County Medical Society)
Weed, Randal W., St. Joseph
Weeks, George R., Cape Girardeau
Weger, Carl C., Keytesville
Wegner, Carl R., St. Louis
Weiford, Edward C., Kansas City
Weiler, Thomas J., St. Louis
Weinel, Francis G., St. Louis
Weinhaus, Robert S., St. Louis
Weinsberg, William C., St. Louis
Weintraub, Solomon A., St. Louis
Weir, Don C., St. Louis
Weir, Royal A., St. Louis
Weis, Matthew W., St. Louis
Weisbrod, Wilfred B., St. Louis
Weisman, Renate D., St. Ann
Weisman, Sol, St. Louis
Weiss, James M. A., Columbia
Weiss, Richard S., St. Louis
Weiss, Stuart, St. Louis
Weitman, Maximilian, St. Louis
Welch, Hooper W., St. Louis
Welker, Joseph E., Kansas City
Well, Julius W., Palmyra
Wells, John H., Kansas City
Welsh, Laurence C., St. Louis
Weltscheff, Christo A., Grandview
Wempe, G. Raymond, Maryville
Wenneker, Alvin S., St. Louis
Wennerman, Sam F., St. Louis
Wentzel, Louis R., St. Louis
Wepprich, Michael S., Washington
Werner, Dean F., N. Kansas City
Werner, Franklin C., Kansas City
Werner, William A., St. Louis
Werth, Duncan S., Glendale
West, Joseph W., St. Louis
Westerman, Henry C., St. Louis
Westrup, Arthur W., Webster Groves
Westrup, Ellsworth A., Webster Groves
Wetzel, Fred S. Jr., Carthage
Weyerich, Leon F., St. Louis
Wheeler, Charles B., Kansas City
Wheeler, John H., Kansas City
Whitaker, Topsy T. H., East Prairie
White, Charles H., Prairie Village, Kans. (Member Jackson County Medical Society)
White, Orville O., St. Louis
White, R. Ned, Springfield
White, Stoughton F., Kansas City
White, William E., Kansas City
White, William H. Jr., St. Louis
Whitehead, Frank F., Neosho
Whiteman, John R., Kansas City
Whitener, Miles C., St. Louis
Whitener, Paul R., St. Louis
Whitman, Doyle C., Kansas City
Whitmore, J. Stewart, Kansas City
Whitsell, Ora E., St. Joseph
Whitten, Marion F., Carthage
Whittico, James M., St. Louis
Wick, Quintin J., Highland, Ill. (Member St. Louis Medical Society)
Wicks, Mary R., Honolulu, Hawaii (Member St. Louis Medical Society)
Wiedershine, Leonard J., St. Louis
Wiegand, Herbert C., St. Louis
Wieman, Harry K., Joplin
Wien, Irving A., Kansas City
Wiener, Meyer, Coronado, Calif. (Member St. Louis Medical Society)
Wiese, Harry W., St. Louis
Wiggins, Roland L., Columbia
Wilbur, David G., Houston
Wilcox, Claude V., St. Louis
Wilcoxen, William B., Bowling Green
Wild, Aloysius A., St. Louis
Wiles, Jack N., West Plains
Wilhelm, Warren F., Kansas City
Wilkinson, Charles B., Kansas City
Wilkinson, Everett A., Kansas City
Will, Leo A., Venice, Fla. (Member St. Louis Medical Society)
Williams, Carol F., St. Louis
Williams, Charles S., Malden
Williams, Delon A., Kansas City
Williams, Edward B. Jr., St. Louis
Williams, Frank R., Kansas City
Williams, George P., Kansas City
Williams, John M., Liberty
Williams, John W., Oak Grove
Williams, John W., Springfield
Williams, John W. Jr., Springfield
Williams, Joseph C. Jr., Kansas City
Williams, Luke E., Kansas City
Williams, Ray D., St. Louis
Williams, Robert A., Kansas City
Williams, Robert S., Mexico
Williams, Roland D., Kansas City
Williams, Starks J., Kansas City
Williams, Vincent T., Kansas City
Williams, W. A. Jr., Fort Smith, Ark. (Member Cape Girardeau County Medical Society)
Williamson, George L., Kansas City
Williamson, Oscar E., St. Louis
Williamson, Walter E., St. Louis
Willis, Norman E., Poplar Bluff
Willits, Lyle G., Kansas City
Willman, Charles R., St. Joseph
Willman, Vallee L., St. Louis
Willoughby, James W., Liberty
Willoughby, Jean B., Kansas City
Willumsen, Henry C., St. Joseph
Wilson, Alice H., Joplin
Wilson, Charles F., Cape Girardeau
Wilson, Clifford C., Kansas City
Wilson, Daniel R., Mount Vernon
Wilson, Fred K., Winston
Wilson, Hester J., Kansas City
Wilson, Hugh M., St. Louis
Wilson, John E., West Plains
Wilson, Keith S., St. Louis
Wilson, Kenneth O., St. Louis
Wilson, Loys C., Kennett
Wilson, Vernon E., Columbia
Wilson, Virgil R., Rosendale
Wilucki, Leo E., St. Louis
Wilucki, Melvin R., St. Louis
Wimmer, Warren J., St. Louis
Wimp, Jesse J., Kirksville
Windhorst, Dorothy B., St. Louis
Windmiller, Myrl E., Columbia
Winer, Herbert J., Kansas City
Winkelman, Esther B., Kansas City
Winn, George W., Boonville
Winokur, George, St. Louis
Winston, Bernard H., Kansas City
Winter, John H., St. Louis
Winter, Tyrus D., St. Louis
Winterer, Roland A., St. Louis
Winters, Kathleen, St. Louis
Wipfler, Earl J. Jr., Columbia
Wippo, Edgar W., St. Louis
Wirthlin, Edward H., St. Louis
Wise, George W., Kansas City
Wise, Gordon F., Springfield
Wissmath, Frank S., Clayton
Wissner, Seth, St. Louis
Withers, Orval R., Kansas City
Withrow, John B., Kansas City
Witt, Clyde M., St. Louis
Witt, Frederick W., St. Louis
Wittler, Harry A., Brentwood
Wittmer, S. C., Springfield
Wolf, Jack W., Kansas City
Wolfe, Edward, St. Louis
Wolff, Harold D., St. Louis
Wolff, Paul G., Cape Girardeau
Wolfram, Philip H., Smithville
Woltzen, Simon W., Clinton
Wommack, Fred L., Crane
Wood, Bennett R., St. Louis
Wood, George F., Fulton
Wood, George H., Carthage
Wood, James A., Clayton
Wood, William W., Springfield
Woodruff, Frederick E., St. Louis
Woods, Harold V., Blue Springs
Woods, Ralph E., St. Louis
Woods, Walton C., Kansas City
Woodward, William W., Independence
Wooldridge, Bart F., Joplin
Wooldridge, W. E., Springfield
Woolf, Ralph B., St. Louis
Workman, Charles E., Kansas City
Workman, George M., Hermann
Worley, Charles A., Sweet Springs
Wortmann, Robert F., Kansas City
Wotawa, William J., St. Louis
Wray, Rolla B., Nevada
Wright, John L., Poplar Bluff
Wright, Robert P., Kansas City
Wu, William Q., Kansas City
Wulff, George J. L. Jr., St. Louis
Wurr, Dieter, St. Louis
Wyatt, Lois C., Kirkwood

## Y

Yaeger, Gerald A., St. Louis
Yancey, Daniel L., Springfield
Yanow, Mitchell, St. Louis
Yates, J. Lewis, Mount Vernon
Yohe, Ruth M., Kansas City
Yore, Richard W., St. Louis
Yoskit, Harry, Festus
Yost, Walter B., St. Louis
Young, Calvin C. Jr., Joplin
Young, James E., Kansas City
Young, Jesse W., Kansas City, Kan. (Member Jackson Medical Society)
Young, John S., St. Louis
Young, Leo P., St. Louis
Young, Paul R., Kansas City
Young, Robert B., Rolla
Young, Robert H., Moberly
Younge, Walter A., St. Louis
Younger, Anita, St. Louis
Younger, Ernest, St. Louis
Yuan, Louis S. K., St. Louis

## Z

Zacharias, David L., Kansas City
Zahn, Robert L., Springfield
Zahorsky, John, Steelville (Member St. Louis Medical Society)
Zahorsky, Theodore S., St. Louis
Zahrt, Frank H., Princeton
Zeffren, Joel L., St. Louis
Zeinert, Oliver B., St. Louis
Zeitler, William T., St. Louis
Zellermayer, Jacob, Kansas City
Zentay, Paul J., St. Louis
Ziegler, Allen M., Holden (Member Jackson County Medical Society)
Ziegelmeyer, John S., St. Louis
Ziegler, Anthony Jr., Vandalia
Ziegler, Dewey K., Kansas City
Zillgitt, George H., St. Louis
Zimmerman, Herbert B., Olivette
Zimmerman, Joseph A., Kennett
Zingale, Frank G., St. Louis
Zink, Oscar C., St. Louis
Zuber, Harold V., Kansas City
Zuckner, Jack, St. Louis
Zwart, Claude H., St. Louis
Zwirn, Benjamin H., St. Louis

# List of Members by County Societies

### ADAIR COUNTY
(North Central Counties Medical Society)

### ANDREW COUNTY MEDICAL SOCIETY

Baker, Warren C., Savannah
Kelley, Gilbert B., Savannah
Kelley, Ralph R., Savannah
Long, Forrest C., Savannah
Wilson, Virgil R., Rosendale

### ATCHISON COUNTY
Nodaway-Holt-Atchison-Gentry-Worth Counties Medical Society)

### AUDRIAN COUNTY MEDICAL SOCIETY

Bradley, William W., Farber
Coil, Paul E., Mexico
Davis, Leonard L. Jr., Mexico
Dwyer, Thomas L., Mexico
Ector, Henry J., Mexico
Epple, Kathryn C., Mexico
Epple, Lawrence K., Mexico
Gantt, Ernest S. Jr., Mexico
Garcia, Charles L., Mexico
Jolly, Benjamin N., Mexico
Jolly, William H., Mexico
Kallenbach, G. P., Mexico
Lankford, Harold D., Mexico
O'Brien, Harry F., Mexico
Rodes, Ned D., Mexico
Rouse, David M., Mexico
Shaw, Gordon, Mexico
Wallace, Edgar S., Mexico
Williams, Robert S., Mexico
Ziegler, Anthony Jr., Vandalia

### BARRY COUNTY
(Ozarks Medical Society)

### BARTON-DADE COUNTY MEDICAL SOCIETY

Arnold, Herbert M., Lamar
Bickel, Vern T., Lamar
Cain, Alvin R., Lamar
Carroll, Thomas W., Lamar
Cowan, Watt O., Greenfield
Guldner, Edmond, Lamar
McNeel, Lee A. Jr., Greenfield

### BATES COUNTY
(West Central Missouri Medical Society)

### BENTON COUNTY MEDICAL SOCIETY

Logan, James A., Warsaw

### BOLLINGER COUNTY
(Unorganized)

### BOONE COUNTY MEDICAL SOCIETY
(Columbia)

Allen, Horace E., Professional Bldg.
Allen, Joseph E., Professional Bldg.
Allen, William C., 2401 Highland Drive
Almond, Carl H., 807 Stadium Road
Anast, Constantine S., 700 Thilly Ave.
Asel, Norman D., Medical Center
Baker, James M., 16 S. 10th St.
Battersby, Richard S., Candle Light Lodge
Black, Samuel P. W., 300 S. Glenwood St.
Brooke, Clement E., 901 Edgewood St.
Brukardt, Diane, Student Health Service
Bruner, Claude R., Professional Bldg.
Buesseler, John A., Medical Center
Bumgarner, James E., 1504 E. Broadway
Bumgarner, Roger W., Route 1
Burns, Thomas W., 1009 S. Providence Road
Calise, Peter J., 67 East Drive
Capps, Eugene C., 807 Stadium Road
Chalkley, Judson I., Boone County Hospital
Chiasson, E. Chaille, Guitar Bldg.
Cochran, Donald Q., Medical Center
Cooper, Maurice E., 1000 Wayne Road
Cope, James C., 1504 E. Broadway
Darnell, Thomas F. B., Doctors Clinic Bldg.
Denninghoff, James C., Address Unknown
Dexheimer, Frank R., Professional Bldg.
Dietrich, Karl D., Professional Bldg.
Eggers, George W. N. Jr., 807 Stadium Road
Evans, Alden M., Ellis Fischel State Cancer Hospital
Froelich, Robert E., Medical Center
Fuchs, George J. Jr., 1026 Hickory Hill Drive
Galeota, William R., Student Health Service
Garrett, Glen H., Professional Bldg.
Gaunt, William D., Medical Center
Hall, David G., 807 Stadium Road
Hanlon, Russell C., Medical Center
Hardwicke, Henry M., Division of Health, Jefferson City
Jackson, Robert L., Medical Center
Johnson, Richard E., Ellis Fischel State Cancer Hospital
Keats, Theodore E., 1110 Lakeshore Drive
Keown, Kenneth K., Medical Center
Kubin, Milford T., Ellis Fischel State Cancer Hospital
Lachance, Leopold, Centralia
Ladenson, Roland P., 16 S. 10th St.
Lamke, Charles M., Professional Bldg.
Landor, John H., 807 Stadium Road
Leech, Charles A., 1504 E. Broadway
Lewis, Ray B., 2012 Valley View Drive
Lodwick, Gwilym S., 208 Ridgeley Road
Logue, John T., 1504 E. Broadway
Lowney, John F., Medical Center
Lucas, Fred V., 807 Stadium Road
McElroy, Glenn L., 909 University Ave.
Marienfeld, Carl J., Medical Center
Martt, Jack M., Medical Center
Mayer, William D., 1000 Lakeshore Drive
Miller, Leroy J., Guitar Bldg.
Modlin, John J., 706 Thilly Ave.
Moranville, Benedict A., 1504 E. Broadway
Neal, M. Pinson, Medical Center
Overholser, Milton D., Medical Center
Payne, John W., Professional Bldg.
Pickard, Clarence M., 3 West Blvd. North
Pingelton, William B., 1006 Cherry St.
Plumlee, John E., 807 Stadium Road
Porterfield, John F., 80 East Drive
Rall, Kenneth L., Medical Center
Ransdell, James F., 4440 Rustic Drive, Carmichael, Calif.
Ray, C. Thorpe, Medical Center
Roark, Glenn E., Student Health Service
Rodgers, Elrie P., Box 157
Sala, Jose M., Ellis Fischel State Cancer Hospital
Scheuber, Charles, 1504 E. Broadway
Schewe, Elmer J. Jr., 1232 Sunset Drive
Schwartz, John T., 807 Stadium Road
See, William B., Professional Bldg.
Sheppard, Lee C. Jr., 2776 Worden St., San Diego 10, Calif.
Sights, Warren P. Jr., 807 Stadium Road
Simpson, Lloyd, 503 Stewart Road
Smith, Grafton A., 1019 Hickory Hill Drive
Smith, Jason N. Jr., 701 West Blvd., South
Smith, Joe R., Professional Bldg.
Spratt, John S. Jr., 204 Leslie Lane
Spurgeon, Milo J., 404 Edgewood Ave.
Stephenson, Hugh E. Jr., Medical Center
Stewart, William J., 909 University Ave.
Suggett, Finis C., 805 Broadway
Thomas, Horace E., 1504 E. Broadway
Thompson, Ian M., Medical Center
Tinsley, John C. Jr., 16 S. 10th St.
Van Peenen, Hubert J., Medical Center
Waggoner, Charles M., Professional Bldg.
Walters, John H., Guitar Bldg.
Walters, Laura, Guitar Bldg.
Ward, Robert L., Centralia
Washington, Edward L., 1504 E. Broadway
Weiss, James M. A., Medical Center
Wiggins, Roland L., 201 N. Third St.
Wilson, Vernon E., Medical Center
Windmiller, Myrl E., 1504 E. Broadway
Wipfler, Earl J. Jr., 400 Leslie Court

### BUCHANAN COUNTY MEDICAL SOCIETY
(St. Joseph)

Allaman, John M., 439 Acacia Dr., Sarasota, Fla.
Ames, Mary B., 2318 Lovers Lane
Ames, William H., 902 Edmond St.
Augustine, Robert W., 902 Edmond St.
Bascom, Charles H., State Hospital No. 2
Beck, Paul M., Kirkpatrick Bldg.
Benson, Scott C., 324 N. 6th St.
Berney, Francis J., 1402 Faraon St.
Boteler, George M., 422 N. 7th St.
Bristow, Robert B., Physicians & Surgeons Bldg.
Butler, E. F., 902 Edmond St.
Carpenter, George T., 902 Edmond St.
Chiarottino, Joseph F., 1302 Faraon St.
Christ, Martin H., 6106 King Hill Ave.
Craig, Owen W. D., Kirkpatrick Bldg.
Day, Maxwell, Schneider Bldg.
DuMont, Clement C., 1905 Francis St.
Ferguson, Luther J., 2907 Francis St.
Fisher, Joseph L., 7th & Jule Sts.
Forgrave, Leon P., 420 N. 8th St.
Forgrave, John R., 420 N. 8th St.
Forman, George W., P. O. Box 747
Fuson, Levi H., Kirkpatrick Bldg.
Grant, Claude S., 1302 Faraon St.
Greenberg, Charles, 10669 Rochester Ave., Los Angeles, Calif.
Grimes, Manning E., Kirkpatrick Bldg.
Handler, Eric, Physicians & Surgeons Bldg.
Harner, Casper G., 902 Edmond St.
Hayes, Paul W., 902 Edmond St.
Herman, Allen I., Physicians & Surgeons Bldg.
Howden, Thomas L., Kirkpatrick Bldg.
Hughes, Judson M., Kirkpatrick Bldg.
Hunt, William J., 2600 Pacific St.
Ide, Lucien W., P. O. Box 747
Kieber, Robert W., Kirkpatrick Bldg.
Kline, Edmund W., Kirkpatrick Bldg.
Knepper, Paul A., P. O. Box 747
Kulowski, Jacob, 1402 Faraon St.
Lee, Carleton H., 2403 Frederick Ave.
McDaniel, John R., 902 Edmond St.
McDonald, Wilbur P., 301 N. 8th St.
Maginn, Richard L., 223 N. 7th St.
Martin, John N., Physicians & Surgeons Bldg.
Meluney, Solomon E., Kirkpatrick Bldg.
Minton, Robert S., Corby Bldg.
Moen, Berwyn H., 902 Edmond St.
Morse, Marvin, 2702 Faraon St.
Mothershead, John L., 2603 Frederick Ave.
Muench, Albert H., Physicians and Surgeons Bldg.
Mundy, Homer F., 2801 Sacramento St.
Nelson, Fred L., 902 Edmond St.
Ness, Carl K., 902 Edmond St.
O'Connor, William B., Kirkpatrick Bldg.
Petersen, Harold E., 2401 Frederick Ave.
Pettit, Manson B., Box 263
Pfeffer, Robert I., 1915 N. 29th St.
Pifer, Lawrence H., 1302 Faraon St.
Potter, Caryl A. Jr., Physicians and Surgeons Bldg.
Potter, Thompson E., 731 Faraon St.
Redmond, William, Corby Bldg.
Riddell, Richard V., 902 Edmond St.
Rogers, John T., 2502 Ashland Ave.
Rosenthal, Irwin I., 2715 Union Ave.
Rost, William B., 2221 N.W. Extension Blvd.
Ryan, John H., 301 N. 8th St.
Senne, Herbert C., 223 N. 7th St.
Senor, Samuel E., 722 Francis St.
Shevlin, Charles F., 902 Edmond St.
Sklenar, Donald E., 1218 N. 3rd St.
Smith, Clifton, 2821 Ashland Ave.
Stacy, Winton T., 1215 N. 24th St.
Stallard, Donald J., 902 Edmond St.
Tadlock, Baxter W., 316 W. Noyes Ave.
Tahir, Mohammad, Box 66, Wyatt Park
Teare, Max E., 1542 E. 50th Ter., Kansas City
Thomas, Forrest, State Hospital No. 2
Thompson, F. Gregg Jr., P. O. Box 830
Thompson, F. Gregg III, 902 Edmond St.
Wadlow, Ernest E., Kirkpatrick Bldg.
Waggoner, Sharon E., 301 Illinois Ave.
Wallace, Hilen K., Route 3
Warres, Herbert L., 902 Edmond St.
Weed, Randal W., 702 Jule St.
Whitsell, Ora E., 824 Edmond St.
Willman, Charles R., Kirkpatrick Bldg.
Willumsen, Henry C., 902 Edmond St.

### BUTLER-WAYNE-RIPLEY COUNTY MEDICAL SOCIETY
(Poplar Bluff)

Barbour, Marvin R., Kneibert Clinic
Beecher, Sheldon B., 1517 Rosedale St.
Biggs, Fred J. Jr., Kneibert Clinic

Boone, Richard, N. E. Florida State Hospital, Macclenny, Fla.
Brandon, Walter L., P. O. Box 407
Brookreson, Alton F., 321 Oak St.
Burcham, Tom R. Jr., Doniphan
Caldwell, Fred, Kneibert Clinic
Canlas, Emilio M., 705 Pine Blvd.
Clay, Hampson S., 218 N. Broadway
Cline, Harold H., Piedmont
Dinelli, Frank E., 215 Oak St.
Engelhardt, Robert C., Kneibert Clinic
Gernstetter, Sangwill L., P. O. Box 473
Hansbrough, Eugene T., 623 Pine Blvd.
Harwell, James L., 203 S. Main St.
Harwell, J. Lester, 10 Plaza Apts., St. Louis
Henrickson, Hardin M., 215 Oak St.
Henrickson, Hardin O., 215 Oak St.
Johnson, Frank C., Doniphan
Kneibert, Fred L., Kneibert Clinic
Loughead, John R., W. Maude St.
McLain, Bobby M., 724 Cynthia St.
McPheeters, James W. Sr., 330 N. 2nd St.
Macauley, Bernard J., 215 Oak St.
Mann, James K., 7721 State Line, Kansas City 14
Markel, Arthur D., Kneibert Clinic
May, Albert L. Jr., 330 N. 2nd St.
Miller, David V., Kneibert Clinic
Moore, Daniel B., 1408 Meadowbrook Ave.
Parker, Arthur C. Jr., Kneibert Clinic
Post, Cyril A., 123 S. Broadway
Ripley, C. E., 623 Pine Blvd
Robertson, William D.
Ruff, T. Eugene, Kneibert Clinic
Turner, James H., 217 Oak St.
Turner, William F., 217 Oak St.
Willis, Norman E., 218 N. Broadway
Wright, John L., 320 N. 2nd St.

### CALDWELL COUNTY
(Grand River Medical Society)

### CALLAWAY COUNTY MEDICAL SOCIETY
(Fulton)

Brown, John J., 101 E. 6th St.
Cremer, William J., State Hospital No. 1
Crews, Robert N., 612 Court St.
Durst, Henry, 610 Court St.
Freund, Harold G., State Hospital No. 1
Gish, Rutledge, 5 E. 5th St.
Groce, George, 607 Court St.
Hill, James E., 607 Court St.
Hunter, James R., Webster Groves
Jackson, Elmer C., State Hospital No. 1
Jackson, Vernon B., 600 E. 2nd St.
Kepler, Earl C., State Hospital No. 1
Nichols, Frank J., State Hospital No. 1
Price, Robert P., State Hospital No. 2, St. Joseph
Ritterbusch, James K., State Hospital No. 1
Robertson, Robert C., 403 River Rd., Fair Haven, N. J.
Rusk, Earl M., 114 Madison St., Jefferson City
Sydow, Henry A., 1014 Chippewa Drive
Tellez, Edward R., 207 Lynn Ave.
Wood, George F., 614 Market St.

### CAMDEN COUNTY

Garrison, T. W., Camdenton (Member Mid-Missouri County Medical Society)
Holley, Donald B., Camdenton (Member Mid-Missouri County Medical Society)
Wayland, Thomas A., Camdenton (Member Cole County Medical Society)

### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY
(Cape Girardeau)

Ashley, Hugh V., 234 N. Sprigg St.
Ashley, Hugh Jr., 234 N. Sprigg St.
Bahn, Charles F., 1902 W. Broadway
Barnes, Seth S., 1854 Broadway
Blankenship, Dale M., 1930 Broadway
Campbell, Edward D., 937 Broadway
Chapman, Jean A., 1902 W. Broadway
Cochran, Jo R., 24 N. Sprigg St.
Crites, Edward, Sedgewickville
Crowe, John T., 937 Broadway
Drace, James J., 903 Bellevue Blvd.
Elrod, Dennis B., 1912 Broadway
Estes, Albert M., 714 Broadway
Ford, Walter W., Gordonville
Hall, Frank W., 1912 Broadway
Hecker, Joseph E., Jackson
Herbert, Charles T., 824 Good Hope St.
Hoxworth, Gerald M., 24 N. Sprigg St.
Jaeger, Joseph N., Jackson
Johnson, Earl W., 937 Broadway
Juden, Alexander G., 4 S. Spanish St.
Jung, J. Marshall, Box 368, Illmo
Kasten, Melvin C., 1453 Themis St.
Keim, John H., 230 N. Sprigg St.
Kinder, James A., 937 Broadway
Kratz, Paul E., 1912 Broadway
Lovinggood, Thomas A., 649 Sylvan Lane
McDonald, Eugene F., Jackson
McGinty, Charles P., 1912 Broadway
Magaletta, George E., 937 Broadway
Nunnelly, Gordon M., 1924 Broadway
Nussbaum, Paul B., 1858 Broadway
Oehler, William F., 234 N. Middle St.
Otto, Thomas G., 1912 Broadway
Rapp, Harold B., 1011 N. Henderson St.
Rawlins, Fred E., 1607 Berthing St.
Reynolds, Garland A., 826 Themis St.
Ridings, Harold D., 937 Broadway
Ritter, Raymond A., 1912 Broadway
Seabaugh, D. Rusby, 219 N. Pacific St.
Seabaugh, Dayton I. L., Jackson
Seabaugh, L. R., 219 N. Pacific St.
Seabaugh, Oda L., 24 N. Sprigg St.
Seabaugh, William O. L., 24 N. Sprigg St.
Shoss, Milton, 937 Broadway
Tygett, Glenn J., 215 N. Sprigg St.
Weeks, George R., 1728 Bessie Ave.
Wilson, Charles F., 714 Broadway
Williams, W. A. Jr., 1609 Memphis St., Fort Smith, Ark.
Wolff, Paul G., 1819 Broadway

### CARROLL COUNTY
(Grand River Medical Society)

### CARTER-SHANNON COUNTY MEDICAL SOCIETY

Rollins, H. D., Winona

### CASS COUNTY
(West Central Missouri Medical Society)

### CEDAR COUNTY
(West Central Missouri Medical Society)

### CHARITON-MACON-MONROE-RANDOLPH COUNTY MEDICAL SOCIETY

Arnold, Eugene L., Veterans Administration Hospital, Jefferson Barracks
Baker, Josephine D., Moberly
Barnett, Floyd A., Paris
Campbell, James E., Macon
Chute, W. Deward, Moberly
Cohrs, Clarence C., Moberly
Collins, Gretchen D., Macon
Dreyer, Philip V., Huntsville
Eggleston, Donald E., Macon
Fleming, J. Will Jr., Moberly
Fleming, Thomas S., Moberly
Harms, Florian L., Salisbury
Hasson, Robert, Moberly
Huber, Lasley E., Moberly
Johnson, Edward M., U. S. Army Hospital, Ft. Campbell, Ky.
Miller, D. Herbert, Veterans Hospital, Montgomery, Ala.
Miller, Howard S., Macon
Ragsdale, George M., Paris
Rice, Grover C., Brunswick
Rinker, Carl T. Jr., Macon
Rowlette, Avery P., Moberly
Smith, Carl C., Moberly
Streetor, Roderick D., 1332 Blackstone Ave., St. Louis
Stuart, Daniel D., Brunswick
Szymanski, Stanley R., Moberly
Weger, Carl C., Keytesville
Young, Robert H., Moberly

### CHRISTIAN COUNTY
(Ozarks Medical Society)

### CLARK COUNTY
(Lewis-Clark-Scotland County Medical Society)

### CLAY COUNTY MEDICAL SOCIETY

Adams, Howard D., 114 N. Water St., Liberty
Allain, James J., 3406 Neighbor Road, St. Joseph
Allan, James R., 110 E. Broadway, Excelsior Springs
Allen, S. Lloyd, Parkville
Baird, J. Edward, 202 Thompson St., Excelsior Springs
Bates, George C., 2730 S. Mall, Kansas City 19
Boone, Daniel S., 3329 Mohawk Lane, Kansas City 16
Bowles, Richard P., 112 N. Water St., Liberty
Bruce, Paul C., 115 S. Titus Ave., Excelsior Springs
Chastain, Maurice W., 2016 Swift Ave., N. Kansas City
Chiles, David R., Smithville
Cox, William L., 101 W. Kansas St., Liberty
Dunham, Robert H., 2025 Swift Ave., N. Kansas City
Dwyer, Reinhardt D., 1806 Swift Ave., N. Kansas City
Edwards, Theodore F., 329 Armour Blvd., N. Kansas City
Fakhoury, Donald A., 4030 N. Oak St., Kansas City 16
Fischer, Edward H., 306 E. 21st Ave., N. Kansas City
Fowler, I. Charles, 2025 Swift Ave., N. Kansas City
Gauer, Robert J., 2730 S. Mall St., Kansas City 16
Goodson, William H., 12 N. Main St., Liberty
Hayes, Lawrence L., 8400 N. Oak St., Kansas City 18
Hendren, Glenn W., 114 N. Water St., Liberty
Hobbs, Earl B., Smithville
Hodge, Robert H., 329 Armour Rd., N. Kansas City
Houck, Russell M., V. A. Hospital, Kecoughtan, Va.
Jones, Charles E., 101 Kansas Ave., Liberty
Knox, Earl R., Rialto Bldg., Kansas City
Kratz, Frederick W., 1927 W. 152 Highway, Liberty
Kuenzi, Donald E., 8400 N. Oak St., Kansas City
Langhus, Melvin O., 104 W. Englewood Rd., N. Kansas City
Lewis, Albert G., Smithville
Love, Drury M., 613 E. 66th St., Kansas City 10
McCormick, James E., 4030 N. Oak St., Kansas City 16
McCracken, Samuel R., 107 W. Spring St., Excelsior Springs
Mullins, Bernard L., 1806 Swift Ave., N. Kansas City
Musgrave, David E., Excelsior Springs
Parker, Robert H., 2005 Fayette St., N. Kansas City
Pate, Otho S., Pioneer Bldg., N. Kansas City
Perry, Lawrence L. Jr., 2025 Swift Ave., N. Kansas City
Petersen, Eugene G., 6708 N. Oak St., Kansas City
Pileggi, Felix A., 307 E. 55th Ter., N. N. Kansas City
Porter, Russell C., 831 N. Camino Miramonte, Tucson, Ariz.
Revare, Paul, 2025 Swift Ave., N. Kansas City
Richardson, William D., 4608 N. Forest Ave., Kansas City
Roberts, L. Marvin, 5140 Antioch Road, Kansas City
Robichaux, Eugene B., 116 South St., Excelsior Springs
Sanders, George E., 116 South St., Excelsior Springs
Sawyer, Floyd E., 1900 Swift Ave., N. Kansas City
Schertz, Truman B., 2022 Swift Ave., N. Kansas City
Spelman, Archibald E., Smithville
Sportsman, Weldon L., 6309 N. Grand Ave., Kansas City
Vescovo, Paul C., Smithville
Waterman, Franklin M., Liberty
Werner, Dean F., 2025 Swift Ave., N. Kansas City
Werner, Franklin C., 5140 Antioch Road, Kansas City
Williams, John M., Liberty
Willoughby, James W., Liberty
Withrow, John B., 2730 S. Mall St., Kansas City
Wolfram, Philip H., Smithville
Zacharias, David L., 6708 N. Oak St., Kansas City

### CLINTON COUNTY MEDICAL SOCIETY

Kimes, Ira D., Cameron
Luckenbill, Paul T., Plattsburg
Mabrey, John P., Plattsburg
Netherton, George F., Cameron
Spalding, Wilber B., Plattsburg

### COLE COUNTY MEDICAL SOCIETY
(Jefferson City)

Belden, Edgar A., State Office Bldg.
Belinson, Louis, State Office Bldg.
Bowe, Edwin E., 401 N. Ridgway St.
Bruce, James G., Central Missouri Trust Bldg.
Clark, Kendall A., 515 E. High St.
Cox, William A., 105 E. High St.
Dorris, Richard P., Trust Bldg.
Enloe, Lawrence D., Trust Bldg.
Exon, C. Stuart, 515 E. High St.,
Garner, Lynn M., State Division of Health
Gordon, James S., 515 E. High St.
Guhleman, Henry V. Jr., Medical Arts Bldg.
Gurnee, Landon H., 515 E. High St.
Handler, Fred F., 95 E. Circle Drive
Kanagowa, Hajime H., Medical Arts Bldg.
Kelly, Marshall W., 507 E. High St.
Klebba, Larry B., P. O. Box 403
Leslie, J. Paul, 933 Fairmount Blvd.
Leslie, James T., 4612 Hanford Lane, Louisville, Ky.
Leslie, James T. Jr., 214 Jackson St.
Loyd, Earl L., 515 E. High St.
McHaney, John W., 606 E. High St.
McKnelly, William V., 507 E. High St.
Mansur, Edward E., 2012 N. W. 13th St., Miami, Fla.
Matthews, John I., 302 Bolivar St.
Maxey, Hugh W., Box 236
May, Richard E., Division of Health
Meier, Francis X., 1913 Haysilton Drive
Meinershagen, Charles W., 138 Forest Place
Ossman, Julian A., 2030 W. Main St.
Richardson, Reginald G., 421 Lafayette St.
Russell, Joseph P., Division of Health
Sanders, J. S., 515 E. High St.
Sennott, John S., 515 E. High St.
Shull, George D., 521 E. High St.
Stauffer, Harry B., Central Trust Bldg.
Stephan, August P., 98 W. Circle Drive
Stricker, Harold C., 515 E. High St.
Sugarbaker, Everett D., 503 E. High St.
Summers, Joseph S. Jr., 515 E. High St.
Tanner, Robert H., 1608 Greenberry Road
Taylor, Leon A., 129 E. High St.
Tietjen, Frederick O., 213 Jackson St.
Watts, Byron E., 515 E. High St.
Wayland, Thomas A., Box 239, Camdenton

### COOPER COUNTY MEDICAL SOCIETY
(Boonville)

Abele, William A., 329 Main St.
Avery, Willard B., 329 Main St.
Beckett, Theodore C., 317 Main St.
Boley, James O., 3200 E. Meyer Blvd., Kansas City
Chamberlain, Gilbert L., 315 Center Ave.
Diekroeger, Manuel L., R. D. 1
Friedrichs, Vernon D., Pilot Grove
Hata, Daikichi, 329 Main St.
Humphreys, Edward T., 329 Main St.
Nolen, Jack R., 329 Main St.
Sandy, Charles, 4209 W. 70th St., Prairie Village, Kansas
Stuart, Byron M., 329 Main St.
Winn, George W., 329 Main St.

### CRAWFORD COUNTY
(Mid-Missouri County Medical Society)

### DADE COUNTY
(Barton-Dade County Medical Society)

### DALLAS-HICKORY-POLK COUNTY MEDICAL SOCIETY

Barnett, Charles H., Bolivar
Brooks, John M., 840 S. Pickwick St., Springfield
Griffin, Mary E. P., Buffalo
Griffin, Olin A. Jr., Buffalo
Harrell, Henry J., Morrisville
Koon, Ben H., Bolivar
McCraw, Doyle C., Bolivar
Robinson, George G., Humansville

### DAVIESS COUNTY
(Grand River Medical Society)

### DEKALB COUNTY
(Grand River Medical Society)

### DENT COUNTY
(Mid-Missouri County Medical Society)

### DOUGLAS COUNTY
(South Central Counties Medical Society)

### DUNKLIN COUNTY MEDICAL SOCIETY

Baldwin, Paul, Kennett
Beal, Homer, Malden
Belsey, Wallace A., Campbell
Benson, Leo J. Jr., Kennett
Cash, Charles R., Kennett
Croom, Dorwyn W., Malden
Dempsey, Davis T., Kennett
Dunmire, George Q., Kennett
English, Wallace D., Cardwell
Green, Roger L., Senath
Hopkins, Florian G., Gideon
Milligan, Monti C., Campbell
Miltenberger, Paul C., Kennett
Morehead, William E., Kennett
Palenske, Robert L., Hornersville
Peck, Chester R. Jr., Kennett
Rutledge, William J., Campbell
Spence, Elbert L., Kennett
Swafford, Owen J., Senath
Tarver, Quinton, Kennett
Van Cleve, John D., Malden
Williams, Charles S., Malden
Wilson, Loys C., Kennett
Zimmerman, Joseph A., Kennett

### FRANKLIN-GASCONADE-WARREN COUNTY MEDICAL SOCIETY

Bonney, Samuel C., Washington
Bozzo, Raymond J., Washington
Brenner, Paul A., Owensville
Crawford, Robert M., Sullivan
de la Torre, John J., Sullivan
Denny, Hubert M., Union
Eisenmann, Benjamin P., New Haven
Eyermann, H. Walter, Warrenton
Giem, Ross N., Sullivan
Hoelscher, Harold F., Warrenton
Johnson, Grover C., Marthasville
Mays, Frank G., Washington
Muench, Ludwig O., Washington
Pearl, John F., St. Clair
Post, John P., Washington
Richardson, George A., Union
Richardson, William R., Union
Royse, Roy P., Sullivan
Ryan, John B., Washington
Schmidt, Charles A., Gerald
Schmidt, Herbert H., Washington
Shaw, Carvel T., Hermann
Shea, James G., Gerald
Steinbeck, Herbert D., Union
Strehlman, Benjamin G., Union
Wepprich, Michael S., Washington
Workman, George M., Hermann

### GASCONADE COUNTY
(Franklin-Gasconade-Warren County Medical Society)

### GENTRY COUNTY
(Nodaway-Holt-Atchison-Gentry-Worth County Medical Society)

### GRAND RIVER MEDICAL SOCIETY
(Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-Dekalb Counties)

Allen, Erroll W., Carrollton
Bales, Eugene L., Carrollton
Bohnsack, Ralph W., Brookfield
Booth, Herbert R., Hamilton
Brennan, Raymond J., Chillicothe
Brewer, Lake, Ridgeway
Brownfield, Samuel T., Brookfield
Broyles, Watkins A., Bethany
Carpenter, George W., Chillicothe
Carter, Howard, Hamilton
Clark, Chester L., Trenton
Conrad, Joseph, Chillicothe
Cullers, Charles H., Trenton
Daley, Frank R., Hamilton
Dixon, John R., Brookfield
Dowell, Donald M., Chillicothe
Dowell, Horace S., Chillicothe
Dowell, J. Larry, Pattonsburg
Duffy, Oliver F., Trenton
Ellsworth, Willard, Cainsville
Fair, William L., Chillicothe
Fuson, William A., Trenton
Gale, Joseph F., Chillicothe
Gary, George, Marceline
Gearhart, Merriam, Bethany
Haskell, Ralph E., Norborne
Horner, Glennon A., Marceline
Howell, Billy D., Brookfield
Kimberlin, Herbert C., Trenton
LaSalle, Michael W., 1601 E. 47th Ter., Kansas City
McArtor, Thomas R., Browning
Magill, Joseph S., Milan
Mairs, Edgar J., Trenton
Mandler, George, Chillicothe
Nibbe, Albert F., Bethany
Nixon, Edward E., Gallatin
Perry, John M., Princeton
Platz, John H., Carrollton
Smith, Robert W., Marceline
Staton, R. Hamilton, Carrollton
Sutherland, Gladys P., Bethany
Sweiger, James H., Maysville
Thompson, Emma A. B., Dumas Apts., Columbia
Titmarsh, J. B. Jr., Bethany
Vandiver, Virgil D., Chillicothe
Vinyard, Jack L., Carrollton
Wilson, Fred K., Winston
Zahrt, Frank H., Princeton

### GREENE COUNTY MEDICAL SOCIETY
(Springfield)

Allen, Jerry H., 1211 S. Glenstone St.
Allison, James B., 1636 S. Glenstone St.
Anthony, Dallas D., Professional Bldg.
Ash, Charles J., 743 Riverside Drive
Ashley, Thomas E., 1211 S. Glenstone St.
Atkinson, Thomas E. Jr., 609 E. Cherry St.
Auner, Cecil R., 600 S. Glenstone St.
Baldwin, Richard, 600 S. Glenstone St.
Barber, John J., Corrigan, Tex.
Bonebrake, MacDonald, Professional Bldg.
Box, Ernest M., 412 E. Commercial St.
Brown, Alex L., 1636 S. Glenstone St.
Brown, James T., 1653 S. National St.
Brown, Lyman D., 311 College St.
Burkey, Jordan W., Professional Bldg.
Busiek, Erwin F., Professional Bldg.
Busiek, Paul J., Professional Bldg.
Busiek, Urban J., Professional Bldg.
Callaway, Guy D., 1155 S. Delaware St.
Callaway, Guy D. Jr., 1211 S. Glenstone St.
Christy, Raymond A. Jr., 1211 S. Glenstone St.
Clarke, Michael J., 1636 S. Glenstone St.
Clary, William F., 1636 S. Glenstone St.
Clawson, James W., Professional Bldg.
Clayton, Edgar L., Professional Bldg.
Cochran, Thomas E. Jr., 2423 Brentwood Blvd.
Coller, Frederick B., 2433 Marlan St.
Conrad, Raymond C., 609 Cherry St.
Crawford, Oral B., Professional Bldg.
Cunningham, Darral D., 1715 Boonville Ave.
Delzell, William A., McDaniel Bldg.
Dietz, M. Wendell, Burge Protestant Hospital
Dillard, Erin M., Professional Bldg.
Dills, Joseph N., 1715 Boonville Ave.
Dimond, Edgar A., Veterans Administration Hospital, McKinney, Tex.
Dolan, Daniel L., Professional Bldg.
Duncan, Robert D., 1534 E. Sunshine Blvd.
Eastwood, Robert A., 1509 E. Wayland Ave.
Elkins, Ronald F., Professional Bldg.
Ellis, Francis J., Professional Bldg.
Evans, Ezra L. Jr., Professional Bldg.
Farthing, Fred R., 1234 E. Walnut St.
Farthing, Gene W., 1636 S. Glenstone St.
Feller, Charles E., 1523 N. Jefferson St.
Ferguson, John P. Jr., 1219 S. Clay St.
Ferrell, Thomas E. Jr., 1534 E. Sunshine Blvd.
Fessenden, Ersel M., 634 Kingsbury St.
Fitch, C. H. Max, 1711 Boonville Ave.
Focht, Ralph H., Strafford
Francis, William C., 600 S. Glenstone St.
Freeman, Hal E., 609 Cherry St.
Gentry, Merritt L., 1933 Saratoga St.
German, Walter A. Jr., 1211 S. Glenstone St.
Giddings, Frank C., Burge Protestant Hospital

Glenn, Elmer E., Forsyth
Glynn, Robert R., 1211 S. Glenstone St.
Gorelick, David F., Professional Bldg.
Gose, Don F., 1550 E. Sunshine Blvd.
Hahn, Andrew L., Professional Bldg.
Hall, David W., 2122 Wayland Drive
Hall, Durward G., R. 12, Box 980
Hanan, Ernest B., 724 E. Kingsbury St.
Hanss, Armand W., 600 S. Glenstone St.
Harvey, Harold D., 1531 E. Sunshine Blvd.
H'Doubler, Francis T. Jr., Professional Bldg.
Hogeboom, George W., 3026 E. Glenwood St.
Hollis, Richard W., Professional Bldg.
Holmes, Daniel E., 600 S. Glenstone St.
Holmes, David R., 1636 S. Glenstone St.
Hoover, H. Lee Jr., 1330 E. Walnut St.
Horst, Otto C., Medical Arts Bldg.
Horton, James D., Professional Bldg.
Ivy, Henry B., 600 S. Glenstone St.
Jameson, James E., Professional Bldg.
Johnson, George A., 2734 Luster Ave.
Johnson, George L., Tripler Army Hospital, Box 71, APO 438, San Francisco, Calif.
Johnson, Warford B., Professional Bldg.
Johnson, William F., Professional Bldg.
Johnston, Joseph L., 1855 S. Jefferson St.
Jorel, Louis E., 1636 S. Glenstone St.
Key, James S., 609 Cherry St.
Klingner, George M., 2003 E. Sunshine Blvd.
Knabb, Arthur D., 1630 N. Jefferson St.
Knabb, Harris, 1630 N. Jefferson St.
Knabb, Henry F., 5879 S. W. 60th St., Coral Gables, Fla.
Knabb, Henry F. Jr., 1630 N. Jefferson St.
Knabb, Kenneth E., 1630 N. Jefferson St.
Kolze, Vernon W., 600 S. Glenstone St.
Langston, Walter R., Professional Bldg.
Leidinger, Karl J., Republic
Lemmon, George B., 1101 E. Walnut St.
Lemmon, G. Bruce Jr., Professional Bldg.
Leslie, James F., 1715 Boonville Ave.
Litton, Lyle D., Burge Protestant Hospital
Lockhart, Charles E., Professional Bldg.
Lorenc, Ernest, Professional Bldg.
Lowe, Horace A., Medical Arts Bldg.
Lowe, Horace A. Jr., Medical Arts Bldg.
Lurie, Harold H., 600 S. Glenstone St.
McAlhany, Howard J., 609 Cherry St.
Maddux, William P., Professional Bldg.
Maher, Robert W., Professional Bldg.
Maple, Francis M., 1211 S. Glenstone St.
Marshall, Wilbur J., Professional Bldg.
Menchetti, Don E., 1630 N. Jefferson St.
Meyer, Claude B., Nixa
Morton, Paul C., 1508 E. Stanford St.
Moseley, F. Thomas, 2102 S. Dollison St.
Musick, James D., Medical Arts Bldg.
Napper, Marvin L., Professional Bldg.
Neu, Leo T. Jr., 3008 Carlisle Circle
Overend, Don S., 1211 S. Glenstone St.
Palcheff, Chris L., 1636 S. Glenstone St.
Park, William I. Jr., Professional Bldg.
Penninger, William H., 600 S. Glenstone St.
Peterson, Stanley S., 1211 S. Glenstone St.
Plumlee, William C., 600 S. Glenstone St.
Podrecca, Guido I., Professional Bldg.
Polk, John W., 609 Cherry St.
Powell, Edwin M., Professional Bldg.
Prater, Bill G., Professional Bldg.
Pruett, Paul L., Professional Bldg.
Rainwater, E. H., Professional Bldg.
Rigney, Levi M., Woodruff Bldg.
Rosen, Max, Professional Bldg.
Russell, Earl D., 1503 S. Glenstone St.
Scanlon, Robert C., 1711 Boonville Ave.
Schroff, Carle H., 1630 N. Jefferson St.
Schwartz, Eugene J., Professional Bldg.
Schweitzer, Fred C. Jr., Woodruff Bldg.
Sewell, Walter S., Professional Bldg.
Siceluff, Joseph G., 609 Cherry St.
Silsby, Don H., Landers Bldg.
Silsby, Don J., Professional Bldg.
Silsby, Harry D., Professional Bldg.
Simpson, Albert P., McDaniel Bldg.
Simpson, Emerson L., 1630 N. Jefferson St.
Smith, C. Souter, 620 St. Louis St.
Smith, Harvey S., Burge Protestant Hospital
Snead, William H. Jr., Professional Bldg.
Stewart, Robert B., 600 S. Glenstone St.
Stewart, R. Wendell, Professional Bldg.
Sturtevant, Harwood N., Professional Bldg.
Sundstrom, Frank D., 1211 S. Glenstone St.
Tarrasch, Ernest L., 1636 S. Glenstone St.
Taylor, William E., Southwest Missouri State College
Thomasson, David D., 600 S. Glenstone St.
Tillman, Walter W. Jr., Professional Bldg.
Tombridge, Thomas L., Professional Bldg.
Trotter, W. Yates, Professional Bldg.
Tsang, John L. K., 1636 S. Glenstone St.
Turner, Glenn O., Professional Bldg.
Upshaw, Paul O., Medical Arts Bldg.
Vail, A. Denton, Professional Bldg.
Waddell, Kenneth E., 1211 S. Glenstone St.
Wakefield, Elmer G., 1534 E. Sunshine Blvd.
Wakeman, Jasper N., 600 S. Glenstone St.
Walker, William M., Professional Bldg.
Walsh, William T., 421 Beverly Ave., Morgantown, W. Va.
Webb, Leslie R. Jr., Professional Bldg.
White, R. Ned, Professional Bldg.
Williams, John W., 600 S. Glenstone St.
Williams, John W. Jr., Landers Bldg.
Wise, Gordon F., Professional Bldg.
Wittmer, Samuel C., 600 S. Glenstone St.
Wood, William W., 1211 S. Glenstone St.
Wooldridge, Wilfred E., Professional Bldg.
Yancey, Daniel L., 1211 S. Glenstone St.
Zahn, Robert L., Professional Bldg.

### GRUNDY COUNTY
(Grand River Medical Society)

### HARRISON COUNTY
(Grand River Medical Society)

### HENRY COUNTY MEDICAL SOCIETY

Bradshaw, William D., Clinton
Hollingsworth, Ray S., Clinton
Hughes, Shelby B., Clinton
Jones, Edna M., Clinton
King, Richard H., Clinton
Simmons, Charles R., Windsor
Smith, James O., Clinton
Smith, William J., Windsor
Thurber, Claude M., Windsor
Walker, George S., Clinton
Walker, Hugh B., Clinton
Woltzen, Simon W., Clinton

### HICKORY COUNTY
(Dallas-Hickory-Polk County Medical Society)

### HOLT COUNTY
(Nodaway-Holt-Atchison-Gentry-Worth County Medical Society)

### HOWARD COUNTY MEDICAL SOCIETY

Bloom, William A., Fayette
Dean, Francis D., Fayette
Gardner, Joseph W., Glasgow
Leech, Maurice P., Fayette
Shaw, William J., Fayette
Shaw, William J. Jr., Fayette

### HOWELL COUNTY
(South Central Counties Medical Society)

### IRON COUNTY
(Mineral Area County Medical Society)

### JACKSON COUNTY MEDICAL SOCIETY
(Kansas City)

Aaron, George A., 10901 Winner Road, Independence
Adelman, Arthur, 333 W. Meyer Blvd. 13
Agee, Loren G., 5801 Kingslee Drive 34
Ahlefeld, Charles B., 215 Pershing Road 8
Aisenstadt, E. Albert, 1204 W. 67th St. 13
Alberts, Phillip S., 1205 N.E. 111th Ave., Portland, Ore.
Alberg, Marvin R., Route 6, Box 323-C, Parkville
Allebach, H. K., Research Hospital 8
Allen, Charles H., 831 W. 62nd St., Independence
Allen, Robert E., 4320 Wornall Road 11
Allen, William B., 4620 Nichols Parkway 12
Alsop, Webb S. Jr., 3604 W. 53rd St., Shawnee Mission, Kan.
Altomare, Edward P., 2610 E. 63rd St. 30
Altringer, Arthur N., 305 W. 43rd St. 11
Anderson, Raymond B., 4320 Wornall Road 11
Anderson, Richard W., 1001 Romany Road 13
Andrews, Berneil W., 4320 Wornall Road 11
Andrus, Bailey C., 4320 Wornall Road 11
Appleford, G. Burton, 5303 W. 79th Ter., Prairie Village, Kan.
Arms, Arnold V., 4320 Wornall Road 11
Arst, Herbert E., 1825 E. 89th Ter. 31
Aschman, Theodore H., Plaza Time Bldg. 12
Asher, A. Graham, Professional Bldg. 6
Atcheson, Bellefield, 6524 Overhill Road, Shawnee Mission, Kan.
Atwell, Floyd C., 4620 Nichols Parkway 12
Aull, John, 6544 Summit St. 13
Bachmann, Paul L., 1212 W. Truman Road, Independence
Baer, Alvin J., 751 E. 63rd St. 10
Baker, Philip J,. 11440 E. 47th St. 33
Ball, James E., 1102 E. 47th St. 10
Ballard, V. Bryce, 4320 Wornall Road 11
Bare, Chester I. Jr., 10501 E. 78th Ter. 38
Barelli, Pat A., 425 E. 63rd St. 10
Barnard, John L. Jr., 4312 Nichols Parkway 11
Barnes, Robert H., 6714 Kenwood St. 31
Barnett, Gordon P., 751 E. 63rd St. 10
Barry, Gerald W., 3601a Troost Ave. 9
Barry, John W., 4620 Nichols Road 12
Barry, William B., 4600 Nichols Parkway 12
Baum, Frank E., 701 E. 63rd St. 10
Baumhardt, Edward E., 4635 Wyandotte St. 12
Bay, Merrill R., 1808 W. Main St., Blue Springs
Becker, Richard R., 5622 Holmes St. 10
Becker, Rolfe A., 751 E. 63rd St. 10
Bee, James E., Box 139, 41
Bell, William F., 615 W. Third St., Lee's Summit
Belot, Monti L., 7411 Highway 71, N.W., Parkville
Bennett, James D., 409 E. 63rd St. 10
Benoit, Hector W. Jr., Plaza Parkway Bldg. 12
Berenson, Sheldon E., 4620 Nichols Parkway 12
Bergmann, Victor H., 105 Ward Parkway 12
Bernreiter, Michael, 1246 W. 63rd St. 13
Berry, Guy N., 4320 Wornall Road 11
Berry, Maxwell G., 315 Nichols Road 12
Biggs, Harry L., 63rd & Evanston St. 33
Bikales, Victor W., 425 E. 63rd St. 10
Bills, Marvin L., Plaza Time Bldg. 12
Black, Don A., 6400 Prospect Ave. 32
Black, Eugene C., Professional Bldg. 6
Blim, Richard D., 4320 Wornall Road 11
Bolin, N. Venay, 5720 Howe Drive, Shawnee Mission, Kan.
Boody, Robert J., Plaza Time Bldg. 12
Bordy, Marvin D., 701 E. 63rd St. 10
Borenstine, Joseph, 7307 Holmes St. 31
Boughnou, Harvey P., 315 Nichols Rd. 12
Bourke, Timothy S., 4535 Rockhill Ter. 10
Boutros, Amin, 3112 Linwood Blvd. 28
Bowser, John F., 4320 Wornall Road 11
Boyd, George K., 5111 Independence Ave. 6
Bradford, John F., 4320 Wornall Road 11
Brams, Jack B., 751 E. 63rd St. 10
Braverman, Abe E., 701 E. 63rd St. 10
Brewster, Charlotte M., 2200 McCoy St. 8
Bridgens, James G., 2510 E. Lindwood St. 28
Brown, Adrian J., 12 E. 63rd St. 13
Brown, Irwin S., Plaza Time Bldg. 12
Brown, Robert S., 4706 Broadway 12
Broyles, Glen H., 701 E. Armour St. 9
Brumm, Lawrence W., 6400 Prospect Ave. 32
Bruner, Robert E., 912 Valentine Road 11
Brust, Carl H., 6114 Howe Drive, Mission, Kan.
Bryan, William H. Jr., 3939 Prospect Ave. 30
Buckingham, William, 3641 Locust St. 9
Buckner, Robert C., Plaza Parkway Bldg. 12
Buddrus, David J., 7721 State Line 14
Budke, Harold A., 306 E. 12th St. 6
Buhler, Victor B., 5212 Belleview Ave. 12
Buie, Bruce R., 5801 Kingslee Drive 34
Bunting, Williston P., 305 W. 43rd St. 11
Burns, Beryl I., 1510 Bass Ave., Columbia

Burns, Robert R., 11349 Cowl Hills Drive, Dallas, Tex.
Butcher, Robert W., 7924 Paseo Blvd. 32
Butterworth, Nelson S., 209 W. 47th St. 12
Byers, Philip L., 4320 Wornall Road 11
Caffrey, Raymond J., 1314 W. Red Bridge 14
Caldwell, John K., Argyle Bldg. 6
Callaway, Luther M., 306 E. 12th St. 6
Calovich, Emery R., 4620 Nichols Parkway 12
Campbell, Frederick B., Professional Bldg. 6
Campbell, John G., 1103 Grand Ave. 6
Carbaugh, Glenn C., Bryant Bldg. 6
Carlson, Hjalmar E., Professional Bldg. 6
Carmichael, Francis A. Jr., 4320 Wornall Road 11
Carrier, Edson C., Plaza Medical Bldg. 12
Caruso, Alfred A., 924 Linwood Blvd. 9
Casady, Gilbert N., 9830 Aberdeen Dr., Prairie Village, Kan.
Casebolt, Buford T., 4000 Baltimore Ave. 11
Casebolt, John M., 4000 Baltimore Ave. 11
Casebolt, Milton B., 4000 Baltimore Ave. 11
Casford, Ralph S., 4620 Nichols Parkway 12
Castelaw, Rush E., 3731 Locust St. 9
Cavaness, Ernest W., 1010 Neptune Drive, Leucadia, Calif.
Centner, Paul J., 2727 Main St. 8
Chambers, James Q. Jr., 4620 Nichols Parkway 12
Chandler, Robert A., 701 E. 63rd St. 10
Chapman, Arthur H., Professional Bldg. 6
Chapman, Samuel B., 6400 Prospect Ave. 32
Cheng, Alfred K., JUSMAG, APO 146, Box 43, San Francisco, Calif.
Clark, Harold B., 6215 Agnes St. 30
Clark, Irving H., 5801 Kingslee Drive 34
Clasen, Arthur C., 5775 Collins Ave., Miami Beach 40, Fla.
Cline, Merle A., 4126 St. John Ave. 23
Coburn, Donald F., 6400 Prospect Ave. 32
Cochrane, Joseph J., 4706 Broadway 12
Cockerell, Sanford F., 11200 Winner Road, Independence
Coffey, Ralph R., Professional Bldg. 6
Coffin, Theodore A., Professional Bldg. 6
Cohen, Harry K., 751 E. 63rd St. 10
Cohen, Hilliard, 1291 W. 72nd Ter. 14
Colglazier, Mary C., 3317 E. 43rd St. 30
Colom, George A., 4643 Wyandotte St. 12
Connell, Evan S., Commerce Bldg. 6
Conover, Charles C., 5930 Oakwood Road, Shawnee Mission, Kan.
Cooper, Charles S., 1035 W. Meyer Blvd. 31
Cooper, John H., Argyle Bldg. 6
Cooper, Leo F., 8401 Roe Blvd., Shawnee Mission, Kan.
Cortner, Mary C., 4526 Paseo Blvd. 10
Counsell, Chester M., 708 W. 17th St. 8
Cowherd, Joseph B., 7721 State Line 14
Cox, Kenneth E., 4320 Wornall Road 11
Crocker, Albert M., 2202a E. 31st St. 9
Culbertson, William F., 1253 Huntington Road 13
Curran, Desmond, Federal Reserve Bank Bldg. 6
Curts, Calvin J., 7419 Terrace St. 14
Cutcliff, Daniel J., 415 E. 66th St. 31
Dalton, Timothy T., 701 E. 63rd St. 10
Dann, David S., 701 E. 63rd St. 10
Davis, Herbert V., 4620 Nichols Parkway 12
Davis, Jack M., 9406 E. 63rd St. 33
Davis, John J., 9011 Delmar Blvd., Overland Park, Kan.
Davis, Kenneth A., 209 W. 47th St. 12
Davis, Robert C., Professional Bldg. 6
Day, Cameron B., 44th & Nichols Parkway 11
Decker, Albert I., 2403 W. 70th Ter., Shawnee Mission, Kan.
DeMaria, Peter F., 8125 E. Gregory Blvd. 33.
DeMott, John D., Professional Bldg. 6
DeMotte, John A., Plaza Medical Bldg. 12
Dennie, Charles C., Professional Bldg. 6
Deweese, Everett R., Rialto Bldg. 6
Dickson, Frank D., 4312 Nichols Parkway 11
Diveley, Rex L., 4312 Nichols Parkway 11
Dixon, Otto J., Professional Bldg. 6
Dixon, Vewiser L., 2204 E. 18th St. 27
Dlabal, Luke J., 1210 Ash Ave., Independence
Doane, William L., 1102 130th St., Grandview
Dodge, Mark, 4320 Wornall Road 11
Dodge, Milton, 2005 W. 71st Ter., Shawnee Mission, Kan.
Dolezal, Joseph B., Bryant Bldg. 6
Dorsch, Ervin H., 10901 Winner Road, Independence
Downey, James W., 425 E. 63rd St. 10
Drake, Roy F., Professional Bldg. 6
Draney, Thomas E., 425 E. 63rd St. 10
Drisko, Robert M., 4620 Nichols Parkway 12
Drowns, Bruce V., Professional Bldg. 6
Duer, Mildred C., 310 W. 47th St. 12
Duncan, Ralph E., P.O. Box 2597, 42
Duncan, William H., Professional Bldg. 6
Dunleavy, James D., Wirthman Bldg. 9
Durnell, Monaford D., 615 W. Third St., Lee's Summit
Dwyer, Frank X., 4620 Nichols Parkway 12
Dwyer, Hugh L., City Hall Bldg. 6
Edde, Clifford G., Argyle Bldg. 6
Edmonds, Devilla D., 6400 Prospect Ave. 32
Eisemann, Gustave, 751 E. 63rd St. 10
Eldridge, Charles J., 409 E. 63rd St. 10
Elias, David J., 9306 E. New 40 Highway, Independence
Elliott, James R., 1080 Busch Garden Court, Pasadena, Calif.
Elliott, Raymond G., Bryant Bldg. 6
Elliott, Wade E., 710 W. 12th St. 5
Ellis, Elmer F., 600 E. 22nd St. 8
Elser, Otto H., 10901 Winner Road, Independence
Engel, Lawrence P., Plaza Medical Bldg. 12
Engelking, David F., 9507 E. 63rd St. 33
Enna, Carl D., Argyle Bldg. 6
Eshelman, Albert D., 9306 E. New 40 Highway, Independence
Eubank, David F., Raytown Clinic 33
Eubank, Dillard M., 9406 E. 63rd St. 33
Eubank, William R., Bryant Bldg. 6
Eubank, William Y., 6400 Prospect Ave. 32
Farley, Claude C., 6400 Prospect Ave. 32
Farney, Jacob P., 2721 W. 69th St., Shawnee Mission, Kan.
Farnsworth, Jesse J., Professional Bldg. 6
Feierabend, Frank L., Argyle Bldg. 6
Feist, George V., Professional Bldg. 6
Ferguson, Donald S., 2012 E. 24th St. 27
Ferguson, James T., Bryant Bldg. 6
Ferris, Carl R., 6400 Prospect Ave. 32
Finkle, Robert H., 9507 E. 80th Ter., Raytown
Fitzgerald, Robert H., 10901 Winner Road, Independence
Flanders, Horace F., Professional Bldg. 6
Flanders, Virgil E., Professional Bldg. 6
Flatley, John A., 9406 E. 63rd St 33
Fleming, Royall B., 1433 E. 19th St. 8
Florian, Albert J., 1224 W. 69th Ter. 13
Folck, William P., Professional Bldg. 6
Forman, Louis H., 4635 Wyandotte St. 12
Forsythe, Robert W., 4320 Wornall Road 11
Fouts, Dallas B. Sr., 3030 Blue Ridge Blvd., Independence
Fowler, Fred D., 4320 Wornall Road 11
Fowler, James W., 1103 Grand Ave. 6
Franklin, Curtis U., 2701 E. 31st St. 28
Fredeen, Robert C., Plaza Time Bldg. 12
Frick, John P., Professional Bldg. 6
Friedman, Morris L., 701 E. 63rd St. 10
Fuhrman, Donald L., 4706 Broadway 12
Fulton, Albert E., 9501 Madison Ave. 14
Fury, Tex E., 642 Huntington Road 13
Gainey, Harold L., 4320 Wornall Road 11
Ganley, William C., Argyle Bldg. 6
Gard, Raymond F., 10901 Winner Road, Independence
Garrison, Roy F., 6400 Prospect Ave. 32
Gaskins, John H., 4419 Pennsylvania St. 11
Geha, Braham J., 9814 Lee Blvd., Leawood, Kan.
Geleperin, Abraham, 2625 W. Paseo Blvd. 8
Gempel, Paul A., 315 Nichols Road 12
Gentry, Enoch N. Jr., Telephone Bldg. 6
Gestring, Hugh A., 1220 E. 31st St. 9
Getelson, Joseph, Rialto Bldg. 6
Gibson, David M., St. Luke's Hospital 11
Gilkey, Harry M., Professional Bldg. 6
Gilliland, Oliver S., 420 E. 70th St. 31
Gillmor, Charles S., 420 E. Armour St. 9
Ginsberg, Norman A., 751 E. 63rd St. 10
Gist, William W., 330 W. 47th St. 12
Glasscock, Ernest L., Plaza Time Bldg. 12
Goldman, Stanley L., 751 E. 63rd St. 10
Goldsich, Edward, Plaza Theatre Bldg. 12
Goodman, Leroy, 751 E. 63rd St. 10
Goodson, William H. Jr., Professional Bldg. 6
Goolsbee, Robert L., 6438 Sagamore St., Shawnee Mission, Kan.
Gorrell, Ned B., 615 W. 3rd St., Lee's Summit
Gottsch, Joseph C., Professional Bldg. 6
Grabske, Charles F., 10901 Winner Road, Independence
Grabske, Charles F. Jr., 10901 Winner Road, Independence
Graham, James W., Argyle Bldg. 6
Graham, Wallace H., Argyle Bldg. 6
Grauerholz, James W., 4203 Mercier St. 11
Greaves, Eli A., 7303 Madison Ave. 14
Green, John R., 1107 Appleton St., Independence
Green, Stanley L., 10901 Winner Road, Independence
Greene, W. Wallace, 2008 W. 68th St., Shawnee Mission, Kan.
Gregory, Ralph W., 4620 Nichols Parkway 12
Griffith, John A. Jr., Plaza Medical Bldg. 12
Growdon, John A., Professional Bldg. 6
Guffey, Don C., Professional Bldg. 6
Gullett, Charles C., 1735 Baltimore St. 8
Gundle, Sigmund, 425 E. 63rd St. 10
Gunn, Richard W., Professional Bldg. 6
Haggan, Margaret E., 6228 Agnes Ave. 19
Haight, John M., 3401 E. 12th St. 27
Haith, Walter F., 2701 E. 31st St. 28
Haley, Jack A., 7909 Cambridge, Prairie Village, Kan.
Hall, Thomas B., Professional Bldg. 6
Halperin, Phillip H., 751 E. 63rd St. 10
Hamel, Herbert A., 6306 Morningside Drive 13
Hamill, Robert W., 4320 Wornall Road 11
Hanes, Lee D., 446 W. 69th St. 13
Hanes, Robert L., 12300 S. 71 Highway, Grandview
Hardacre, Ruth A., 3300 Charlotte St. 9
Hardy, John W., Professional Bldg. 6
Harless, Morris S., 409 E. 63rd St. 10
Harned, Bert W., 2826 Main St. 8
Harris, Boyd L., 8982 Kobe Place, San Diego, Calif.
Hart, Lawrence W., 321 Ward Parkway 12
Hartwig, Frederick H., 6400 Prospect Ave. 32
Hash, Emalyn H., 807 W. 69th Ter. 13
Hashinger, Edward H., 7884 Lookout Drive, LaJolla, Calif.
Hausheer, Herman J., 1612 W. Truman Road, Independence
Haynes, Lee, 820 Archibald St. 11
Haynes, Solon E., 2727 Main St. 8
Hazen, Robert M., 6400 Prospect Ave. 32
Heller, B. Marcus, 409 E. 63rd St. 10
Hellerstein, Stanley, 751 E. 63rd St. 10
Helman, Richard G., 7721 State Line 14
Henry, Clarke L., 6616 Winonga Ter., Shawnee Mission, Kan.
Henry, Schubert D., 1115 Grand Ave. 6
Herrman, George V., 4320 Wornall Road 11
Hibbard, Blaine Z., 4320 Wornell Road 11
Hickerson, William H., 604 W. Maple St., Independence
Higgins, Robert S., 1001 W. 55th St. 13
Hill, Jack H., Trinity Lutheran Hospital 8
Hill, Jesse N., 1438 Hedges Ave., Independence
Hink, Frederick W., 10229 Independence Road, Independence
Hirsch, Joe E., 4419 Pennsylvania St. 11
Hodgson, Frank H., 4301 Main St. 11
Hoeper, Samuel D., 12921 Grandview Road, Grandview
Hoffman, Jacob S., 751 E. 63rd St. 10
Hoffmann, R. Lee, Professional Bldg. 6
Hogan, Daniel F., Rt. 100, Laguna Hts., Port Isabel, Tex.
Hogue, Frank S., 4320 Wornall Road 11
Holder, Thomas M., Mercy Hospital 6
Hollweg, Kenneth C., 4320 Wornall Road 11
Holman, Melvin V., 4815 W. 103rd St., Shawnee Mission, Kan.
Holt, Waldo S., 4620 Nichols Parkway 12
Holton, Edward B., 10901 Winner Road, Independence
Hook, Waller C., 6400 Prospect Ave. 32

Hooper, Robert N., Plaza Broadway Bldg. 12
Hornstra, Robijn K., 2200 McCoy St. 8
Hughes, Gerald F., 6400 Prospect Ave. 32
Hungate, Carroll P., Professional Bldg. 6
Hunt, Claude J., 6400 Prospect Ave. 32
Hunter, Martin P., Waldheim Bldg. 6
Hunzicker, Warren J., 2300 Holmes St. 8
Hurwitt, Frank, Park East Hotel 6
Hyde, Lawrence L., 2817 W. 47th Ter., Shawnee Mission, Kan.
Ingham, Walton C., 4320 Wornall Road 11
Irwig, Fred, Professional Bldg. 6
Jackson, William R., Bryant Bldg. 6
Jacob, Walter P., 701 E. 63rd St. 10
Jacobs, Morton, 6314 Brookside Plaza 13
Jacobs, Walter H., 751 E. 63rd St. 10
Jaime, Nicholas, 715 Westport Road 11
James, Otis E. Jr., 6306 Morningside Drive 13
Jansen, Robert, 101 E. 63rd St. 13
Jarvis, James A., 4320 Wornall Road 11
Jeffries, Robert C., 6315 Brookside Plaza 13
Jenab, Morteza, 5400 W. 71st St., Prairie Village, Kan.
Jennett, Harry N., 2701 Forest Ave. 9
Jennett, J. Harvey, Professional Bldg. 6
Johns, Leo E., General Hospital 8
Johnson, C. Laurence, Professional Bldg. 6
Johnson, James S., 2202 E. 18th St. 27
Johnson, Joseph E., 9915 Flora Ave. 31
Johnson, Thomas M., 4320 Wornall Road 11
Johnstone, Paul N., Bryant Bldg. 6
Jonas, Harry S. Jr., 11711 Markham Road, Independence
Jones, George H., 1435 E. 78th St. 31
Jones T. Reid, 411 Nichols Road 12
Justus, John B., Plaza Parkway Bldg. 12
Kantor, Julius M., 701 E. 63rd St. 10
Kantor, Samuel, 751 E. 63rd St. 10
Kartus, Irving, 6155 Oak St. 13
Katz, Milton, 4620 Nichols Parkway 12
Kaul, Philip G., 4320 Wornall Road 11
Keairnes, Harold W., 3800 S. Woodland, Independence
Kealhofer, George C., 6627 Prospect Ave. 32
Keeler, James E., 4620 Nichols Parkway 12
Kelly, Eugene H., The Baptist Home, Ironton
Keltner, Raymond O., 6635 Monroe St., Raytown
Kendall, Charles A., 10901 Winner Road, Independence
Kennard, George K., 4320 Wornall Road 11
Kent, Bela K., 701 E. 63rd St. 10
Kent, Clifford F., Professional Bldg. 6
Kerr, Russell W., 5938 Blue Hills Road 10
Ketcham, William M., Waldheim Bldg. 6
Ketron, Marvin B., 5933 Cherry St. 10
Ketterman, Grace H., 112th & 71 Highway, Hickman Mills
Ketterman, Herbert L., 9231 Belinder Ave. 15
Kettner, Edward G., Professional Bldg. 6
Kienberger, Paul A., 10605 E. 35th Ter., Independence
Kiene, Richard H., 4312 Nichols Parkway 11
Kimball, Merritt H., 610 E. 36th St. 9
King, J. Tenbrook, Plaza Broadway Bldg. 12
King, Walter R., Professional Bldg. 6
Kingsbury, Helen C., 6415 Sagamore Road, Shawnee Mission, Kan.
Kiser, David M., 920 W. 47th St. 12
Kitchen, William M., 425 E. 63rd St. 10
Klein, Edward H., Plaza Medical Bldg. 12
Klepinger, Dayton P., 826 Worwick Court. Neosho
Knight, John S., 305 W. 43rd St. 11
Knight, Lyle B., 615 W. 3rd St., Lee's Summit
Knoch, H. Kermit, Plaza Parkway Bldg. 12
Koehler, Charles A., Argyle Bldg. 6
Kohn, Cecil M., 751 E. 63rd St. 10
Korth, William M., Professional Bldg. 6
Kraft, Jacob, 701 E. 63rd St. 10
Kranson, Seymour J., 11200 Winner Road, Independence
Kuhn, William F. II, 6247 Brookside Ave. 13
Kyger, Fred B., 4911 E. 27th St. 27
Kyger, John E., 701 E. 63rd St. 10
Kyner, Thomas A., Wirthman Bldg. 9
Lacy, N. Eugene, Plaza Time Bldg. 12
Laffoon, France L., 869 Alta Vista Drive, N., Vista, Calif.
Lally, James J., Rialto Bldg. 6
Lamar, Robert F., Professional Bldg. 6
Lambert, L. Marian, 5302 Paseo Blvd. 10
Landis, George K., Professional Bldg. 6
Lapi, Angelo, 2012 Stratford Road, Shawnee Mission, Kan.
Lapp, Harry C., 751 E. 63rd St. 10
Latham, Raymond W., 4620 Nichols Parkway 12
Lauer, Daniel J., General Hospital 13
Laurenzana, Frank P., 428 S. White St. 23
Layton, Ira C., 6400 Prospect Ave. 32
Lee, George C., 601 E. Meyer Blvd. 31
Lehner, Richard L., Professional Bldg. 6
Leifer, William W., 701 E. 63rd St. 10
Leitch, Cecil G., 808 S. 15th St., Blue Springs
Leitz, Frank B., Professional Bldg. 6
Lentz, Clark H., 215 W. Pershing Road 8
Leo, William A., 6400 Prospect Ave. 32
Levey, Harry B., 701 E. 63rd St. 10
Lewis, Revis C., Professional Bldg. 6
Lichtor, Alexander, 751 E. 63rd St. 10
Lichtor, Joseph M., 751 E. 63rd St. 10
Lieberman, B. Albert Jr., 4620 Nichols Parkway 12
Lilly, Terry E. Sr., 306 E. 12th St. 6
Lilly, Terry E. Jr., 306 E. 12th St. 6
Lindquist, Carl N., 106 W. 14th St. 5
Link, Vance E., 1201 W. 36th St., Independence
Linville, Howard E., Professional Bldg. 6
Lloyd, Ivan E., 1816 Rankin St., Independence
Loewy, Louise B., 2625 Paseo Blvd. 8
Lohrentz, Lois H., 1710 Independence Ave. 6
Long, R. Stacy, 6400 Prospect Ave. 32
Lowell, Paul, 4742 Liberty St. 12
Lowrey, Ford J., Rialto Bldg. 6
Lundgren, Fred H. Jr., Plaza Medical Bldg. 12
Luppens, Albert F., RR 2, Box 265, Lee's Summit
Lyddon, Harold F. Jr., 75th & Troost St. 31
Lyle, Ray M., 5725 Park St. 30
Lytton, George J., Plaza Theatre Bldg. 12
McAlester, Andrew W. III, 33 E. Elizabeth St., Brownsville, Tex.
McCalla, John P., Blue Ridge Professional Bldg. 33
McCanse, Andrew, 4320 Wornall Road 11
McCarthy, William F., 140a Lake Topawingo, Blue Springs
McClanahan, Robert C., Professional Bldg. 6
McConchie, James E., 4320 Wornall Road 11
McCoy, Frederick J., 701 E. 63rd St. 10
McCubbin, Clarence R., 701 E. 63rd St. 10
McCullough, Campbell C., Argyle Bldg. 6
McCunniff, William B., Argyle Bldg. 6
McDonald, Bruce P., 2604 Prospect Ave. 27
McDonald, Victor G. Jr., Plaza Time Bldg. 12
McDonnell, John F., 5411 Central St. 12
McFarland, M. Donald, 4320 Wornall Road 11
McGannon, Paul T., 920 W. 47th St. 12
McGuire, Thomas H., 429 W. 58th St. 13
McHale, Thomas C., 4601 Independence Ave. 24
McIntyre, John D., 4516 Cambridge Court 10
McKee, Joseph W., 4320 Wornall Road 11
McKee, Wallace P., 4320 Wornall Road 11
McLeod, John, 116 W. 47th St. 12
McMillan, Thomas E., 6400 Prospect Ave. 32
McPhee, William R., Argyle Bldg. 6
McPherson, Owen P., 12901 Grandview Road, Grandview
McVay, James R., VFW Bldg. 11
McVay, James R. Jr., VFW Bldg. 11
MacInnis, Florence E., 4620 Nichols Parkway 12
Maclean, John A., 2800 E. Colfax Ave., Denver 6, Colo.
MacNaughton, Ralph E., St. Joseph's Hospital 28
MacNaughton, Robert A., 2510 Linwood Blvd. 28
Mangels, Kenneth A., 1212 W. Truman Road, Independence
Marks, Mark M., 701 E. 63rd St. 10
Marsh, Alice, Pleasant Hill
Marshall, Cameron F., Plaza Theatre Bldg. 12
Masucci, Joseph M., Argyle Bldg. 6
Mathewson, Hugh S., 4620 Nichols Parkway 12
May, James W., 425 E. 63rd St. 10
Mayer, John H. Jr., Plaza Parkway Bldg. 12
Melgaard, S. Ross, 6831 Cherry St. 31
Meriwether, Don R., 4620 Nichols Parkway 12
Meyer, Paul W., 4312 Nichols Parkway 12
Meyers, Harold L., 1901 Brookwood St., Mission, Kan.
Miles, George O., 4320 Wornall Road 11
Miller, Clint L., 615 W. 3rd St., Lee's Summit
Miller, Gerald L., 4706 Broadway 12
Miller, Max I., 2826 Main St. 8
Miller, Walter P., 6328 Baltimore Ave. 13
Miller, Wilson H., 3632 Independence Ave. 24
Mitchell, Andrew D., 4320 Wornall Road 11
Mitchell, Robert H., Bryant Bldg. 6
Mixson, William C., 4320 Wornall Road 11
Monahan, Elmer P., 17500 W. 95th St., Lenexa, Kan.
Montello, Samuel A., 4620 Nichols Parkway 12
Montgomery, James G., 6400 Prospect Ave. 32
Mooney, Justin L., Bryant Bldg. 6
Mooney, Marcel L., 751 E. 63rd St. 10
Moore, Robert A., Box 679, 41
Morest, F. Stanley, 1408 Polk St., Hollywood, Fla.
Morgan, David B., 4620 Nichols Parkway 12
Moriarty, Lauren R., St. Mary's Hospital 8
Morris, William R., 9406 E. 63rd St. 33
Moss, Paul, 4706 Broadway 12
Mosser, Robert S., 3114 Norton St., Independence
Mueller, Martin J., Argyle Bldg. 6
Mullen, Leo M., 4443 Paseo Blvd. 10
Multhauf, Cyril J., 5629 W. 50th St., Mission, Kan.
Mundy, William L., 4635 Wyandotte St. 12
Murphy, Robert J., 4320 Wornall Road 11
Myers, John S., Shukert Bldg. 6
Myers, Robert M., Rialto Bldg. 6
Myers, Wilson A., 425 Huntington Road 13
Naime, Mansour J., 425 E. 63rd St. 18
Nash, George W., Professional Bldg. 6
Needels, Orval T., 7400 Wornall Road 14
Nelson, Bentley A., 305 W. 43rd St. 11
Nesselrode, John H., 10901 Winner Road, Independence
Nickson, Charles E. Jr., 10901 Winner Road, Independence
Nicolay, Kenneth S., 4320 Wornall Road 11
Nigro, Dominic M., 207 E. 51st Ter. 12
Nigro, E. Robert, 1047 W. 53rd Ter. 12
Nigro, Joseph A., 1055 W. 55th St. 13
Noltensmeyer, Milton N., 3305 W. 50th Ter., Shawnee Mission, Kan.
Nunn, Pat M., 1401 Southwest Blvd. 8
O'Brien, Leo A., Argyle Bldg. 6
O'Connell, Frank A., 7951 State Line 14
O'Connell, Gerald L., 10301 Overbrook Road, Leawood, Kan.
Ogilvie, John H., Box 157, Route 1, Gravois Mills
O'Hearne, John J., 4643 Wyandotte St. 12
O'Malley, James F., 4706 Broadway 12
O'Neil, James H., 425 E. 63rd St. 10
Ost, Mark D., 4720 Terrace St. 12
Overesch, Harry B., Professional Bldg. 6
Owens, Graham J., 152 W. Mezzanine, Union Station 8
Owens, Hugh H., 152 W. Mezzanine, Union Station 8
Owens, Richard L., 9228 E. Highway 50, 33
Owens, Robert H., 4706 Broadway 12
Ozar, Milton B., 701 E. 63rd St. 10
Padfield, Earl G. Jr., Plaza Broadway Bldg. 12
Pakula, Sidney F., 751 E. 63rd St. 10
Pallett, Harold A., 4620 Nichols Parkway 12
Parker, Elmer L., 3027 Campbell St. 9
Parker, Hubert M., Argyle Bldg. 6
Parsons, Eugene O., 315 Nichols Road 12
Passman, Harold, 701 E. 63rd St. 10

Pearson, Paul E., Rialto Bldg. 6
Peete, Don C., Professional Bldg. 6
Penner, Stanley, 751 E. 63rd St. 10
Perll, Maurice F., 830 W. 61st Ter. 13
Perll, Rita D., 830 W. 61st Ter. 13
Perry, Ralph, 6400 Prospect Ave. 32
Peters, Evelyn L., Menorah Medical Center 10
Petersen, A. Gene, 4444 Wornall Road 12
Peterson, Carl M., 2701 E. 31st St. 28
Peterson, George L., 4806 W. 68th St., Shawnee Mission, Kan.
Peterson, Milton C., 701 E. 63rd St. 10
Peterson, Walter R., 2701 E. 31st St. 28
Petry, Ezra L., 701 E. 63rd St. 10
Pfuetze, Edwin L., Plaza Parkway Bldg. 12
Pickard, Nicholas S., 6210 High Drive, Shawnee Mission, Kan.
Pickens, Edgar E., 4826 Roanoke Parkway 12
Pierron, John B., 6516 Linden Road 13
Pinsker, Oscar T., Doctors Bldg. W. 10
Piper, Donald K., Professional Bldg. 6
Pipkin, Garrett F., Argyle Bldg. 6
Pittam, Radford F., 418 Hyde Park, Hutchison, Kan.
Polk, George M., 12112 E. 52nd Ter., Kansas City 33
Pollock, Leo H., 751 E. 63rd St. 10
Pope, Charles H. Jr., 10901 Winner Road, Independence
Porter, Louis, 701 E. 63rd St. 10
Potter, Lee G., Professional Bldg. 6
Powell, Nelson E., Argyle Bldg. 6
Powers, John M., 3304 Linwood St. 9
Prentiss, Harry S., Rialto Bldg. 6
Preston, Albert Jr., 4635 Wyandotte St. 12
Printz, Joseph H., 701 E. 63rd St. 10
Printz, Otto J., 701 E. 63rd St. 10
Pucci, Gregory L., 1246 Huntington Road 13
Pugh, Richard G., 1612 W. Truman Road, Independence
Quer, Erich A., 6400 Prospect Ave. 32
Quistgard, Paul C., 6741 Prospect Ave. 32
Rader, Ada B., Martin City
Ramey, Ehret O., 4635 Wyandotte St. 12
Ramos, John F. Jr., 2849 Indiana Ave. 28
Randolph, Andrew J., 2206 E. 18th St. 27
Rannie, Paul R., 709 S. Fuller St., Independence
Rector, Joe L. Jr., St. Luke's Hospital 11
Reinhardt, George R., 6400 Prospect Ave. 32
Reister, Phillip D., Argyle Bldg. 6
Reitz, Carl H., 7329 Broadway 14
Remley, George C., Argyle Bldg. 6
Reynolds, Clarence C., 4615 E. 43rd Ter. 30
Rhoades, Arthur B., Professional Bldg. 6
Richardson, Marion W., 2526 Prospect Ave. 27
Richert, Robert C., General Hospital 8
Riller, Lowell E., Professional Bldg. 6
Rinkel, Herbert J., Bryant Bldg. 6
Roberts, Grosvenor G., 701 E. 63rd St. 10
Roberts, Harold M., Professional Bldg. 6
Roberts, Sam E., Professional Bldg. 6
Robinson, Arthur W., 4320 Wornall Road 11
Robinson, E. Kip, Professional Bldg. 6
Robinson, G. Wilse Jr., 2625 Paseo Blvd. 8
Robinson, William J., 9931 Lee Circle, Leawood, Kan.
Robison, James T. Jr., 4620 Nichols Parkway 12
Rodgers, George H., General Hospital
Rodgers, Samuel U., 2701 E. 31st St. 28
Rose, Charles W., 334 S. Van Brunt St. 24
Rubin, Sidney, 1287 W. 72nd St. 14
Rubnitz, Leon H., 701 E. 63rd St. 10
Rufe, John R., Bryant Bldg. 6
Russell, James L., 3510 W. 48th St., Shawnee Mission, Kan.
Russell, Richard L., Professional Bldg. 6
Russell, Robert K., 63rd & Evanston, Raytown 33
Saferstein, A. Lester, 6859 Cherry St. 31
Saladino, Anthony, Argyle Bldg. 6
Samuelson, Edward A., 4620 Nichols Parkway 12
Sanders, Harmon U. Jr., 10901 Winner Road, Independence
Sanders, William F., 411 Nichols Road 12
Santoro, Carlos G., 2211 W. 71st St., Prairie Village, Kan.
Saper, Philip, 3 E. 3rd St., Lee's Summit
Sauer, Gordon C., 6400 Prospect Ave. 32
Saunders, Everett L., 121 W. Lexington St., Independence
Scarpellino, Louis A., St. Luke's Hospital 11
Schaerrer, Hans, 5245 Mercier St. 12
Schaerrer, William C., 4320 Wornall Road 11
Schiffmacher, Jack E., Professional Bldg. 6
Schillie, Gene A., 6400 Prospect Ave. 32
Schorer, Edwin H., 5049 Wornall Road 12
Schottman, Gerhard W. Jr., St. Luke's Hosp. 11
Schutz, Carl B., 320 W. 47th St. 12
Schutz, Richard B., Plaza Time Bldg. 12
Seeley, J. Bradford, 1808 W. Main St., Blue Springs
Seely, Clark W., 4320 Wornall Road 11
Sewell, Minor F., 1722 W. 39th St. 11
Shapiro, Lazare M., 701 E. 63rd St. 10
Sheahon, John A., 9406 E. 63rd St. 33
Shecter, Nathan, 701 E. 63rd St. 10
Shelden, Russell D., 701 E. 63rd St. 10
Sheldon, John, 6305 Brookside Plaza 13
Shifrin, Alexander, 6824 Holmes St. 31
Shireman, Kenneth L., 4606 St. John St. 23
Shires, Edward B., 10312 Cherokee Lane, Leawood, Kan.
Shockley, Clarence J., 5927 McGee St. 13
Shofstall, Charles K., 310 W. 47th St. 12
Shuey, Herbert H., 3903 Brooklyn St. 30
Shypper, Moses J., 751 E. 63rd St. 10
Simon, Sanford, 8129 Rosewood St., Shawnee Mission, Kan.
Sinclair, Alexander B., 920 W. 47th St. 12
Skillman, Robert K., 4320 Wornall Road 11
Skinner, John O., Bryant Bldg. 6
Skinner, John T., Bryant Bldg. 6
Slentz, Edwin L., 4320 Wornall Road 11
Slentz, William A., 4320 Wornall Road 11
Slickman, R. A., 7721 State Line 14
Small, Walter L., Hyde Park Hotel 11
Smith, Arthur B., 6400 Prospect Ave. 32
Smith, Dale C., 231 W. 47th St. 12
Smith, H. Eugene, Plaza Time Bldg. 12
Smith, Ira T., 6400 Prospect Ave. 32
Smith, O. D., 6300 Woodson St., Mission, Kan.
Smith, Wallace B., 10901 Winner Road, Independence
Sneid, Philip, 701 E. 63rd St. 10
Snider, Samuel H., 722 Ward Parkway 21
Spafford, Allen L., 315 Nichols Road 12
Spurny, Otto M., 409 E. 63rd St. 10
Stacey, Wallace R., 10901 Winner Road, Independence
Staggs, William A., Argyle Bldg. 6
Staley, Harry R., Bryant Bldg. 6
Starke, Helen (Sister Paula Theresa), Queen of the World Hospital 27
Statland, Harry, 751 E. 63rd St. 10
Statland, Morris, 751 E. 63rd St. 10
Steffen, Lawrence F., Professional Bldg. 6
Stegman, Elmer G., 6137 Blue Ridge Blvd. 33
Stein, Joseph W., Professional Bldg. 6
Stelle, Charles W., Box 1159, Bendix Corp. 41
Stelmach, Walter J., 7949 State Line 14
Stockton, Raymond W., 4320 Wornall Road 11
Stockwell, A. Lloyd, Professional Bldg. 6
Stotts, Charles S., 8221 Nall Ave., Prairie Village, Kan.
Stratemeier, Edward H., Rialto Bldg. 6
Summers, Caldwell B., Plaza Theatre Bldg. 12
Swisher, Robert C., 425 E. 63rd St. 10
Switzer, Clyde, 8100 W. 54th Ter., Merriam, Kan.
Szabados, Ernest D., 1612 W. Truman Road, Independence
Tarson, Solomon S., 3221 Troost Ave. 9
Tasker, Charles B., 31st & Wyandotte St. 8
Teall, Raymond E., 650 W. 56th St. 13
Terrill, Robert S., 4643 Wyandotte St. 12
Tesson, James A., Rialto Bldg. 6
Theel, Otto W. Jr., 4301 Main St. 11
Thiele, George H., 411 Nichols Road 12
Thomas, Christopher Y., 4320 Wornall Road 11
Thompson, Charles L., 4320 Wornall Road 11
Thorn, Druery R., Plaza Medical Bldg. 12
Tice, Wayne K., 4320 Wornall Road 11
Trippe, Harrison C., 6247 Brookside St. 13
Trowbridge, Barnard C., 415 E. 63rd St. 10
Trowbridge, Ellsworth H., 5317 W. 72nd St., Prairie Village, Kan.
Trowbridge, Ellsworth H. Jr., Professional Bldg. 6
Turner, Percy C., 1433 E. 19th St. 8
Tutera, Dominic F., Plaza Medical Bldg. 12
Tuthill, Herbert, Rialto Bldg. 6
Twin, Edward J., 701 E. 63rd St. 10
Twyman, Richard A., 4320 Wornall Road 11
Underwood, Dick H., Bryant Bldg. 6
Underwood, Harry A., 5100 E. 24th St. 27
Underwood, Johnson Jr., Professional Bldg. 6
Underwood, Ross H., Bryant Bldg. 6
Unger, Harold, 701 E. 63rd St. 10
Upsher, Albert E., Argyle Bldg. 6
Van Biber, James T., 1612 W. Truman Road, Independence
Van Buskirk, Terrance E., 5246 St. John Ave. 23
Van Buskirk, William C., Professional Bldg. 6
Vaughn, James W., Neurological Hospital 8
Vilmer, Charles, Professional Bldg. 6
Vincent, Jack C., 701 E. 63rd St. 10
Virden, Herbert H., Professional Bldg. 6
Voth, Harold W., Plaza Medical Bldg. 12
Wade, Frederick E., Professional Bldg. 6
Wakefield, Franklin H. Jr., 1102 Grand Ave. 6
Walker, James C., 2727 Main St. 8
Walker, John W., 6400 Prospect Ave. 32
Walker, Orville C. Jr., 11200 Winner Road, Independence
Wall, Arthur H., 153 Santa Anita Court, Sierra Madre, Calif.
Wall, Harry C., 751 E. 63rd St. 10
Wall, Leonard A., 4320 Wornall Road 11
Ward, Robert L., 4126 St. John Ave. 23
Watson, Ethel, First National Bank Bldg., Independence
Waxman, David, 4840 Prospect Ave. 30
Waxman, Jane Z., 4840 Prospect Ave. 30
Webster, Joseph G., Plaza Parkway Bldg. 12
Weiford, Edward C., 4320 Wornall Road 11
Welker, Joseph E., 6441 Summit St. 13
Wells, John H., 3718 Prospect Ave. 28
Weltscheff, Christo A., 1800 Blue Ridge Ext., Grandview
Wheeler, Charles B., 820 W. 57th St. 13
Wheeler, John H., 4320 Wornall Road 11
White, Charles H., 6518 Overhill Road, Prairie Village, Kan.
White, Stoughton F., 4320 Wornall Road 11
White, William E., Argyle Bldg. 6
Whiteman, John R., 6314 Brookside Plaza 13
Whitman, Doyle C., Sharp Bldg. 6
Whitmore, J. Stewart, 1309 W. 58th St. 13
Wien, Irving A., Professional Bldg. 6
Wilhelm, Warren F., 6400 Prospect Ave. 32
Wilkinson, Charles B., 4604 Benton Blvd. 30
Wilkinson, Everett A., 6400 Prospect Ave. 32
Williams, Delon A., 1252 Stratford Road 13
Williams, Frank R., 4320 Wornall Road 11
Williams, George P., 10604 Blue Ridge Ext. 34
Williams, Joseph C. Jr., 6400 Prospect Ave. 32
Williams, Luke E., 2201 E. 27th St. 27
Williams, Robert A., 3701 Broadway 11
Williams, Roland D., 305 W. 43rd St. 11
Williams, Starks J., 4009 Wabash St., Kansas City, 30, Kans.
Williams, Vincent T., Argyle Bldg. 6
Williamson, George L., Professional Bldg. 6
Willits, Lyle G., Professional Bldg. 6
Willoughby, Jean B., 6400 Prospect Ave. 32
Wilson, Clifford C., Plaza Time Bldg. 12
Wilson, Hester J., Plaza Time Bldg. 12
Winer, Herbert J., 751 E. 63rd St. 10
Winkelman, Esther B., 7449 Broadway 14
Winston, Bernard H., 751 E. 63rd St. 10
Wise, George W., 4620 Nichols Parkway 12
Withers, Orval R., Plaza Parkway Bldg. 12
Wolf, Jack W., 409 E. 63rd St. 10
Woods, Harold V., 808 S. 15th St., Blue Springs
Woods, Walton C., Medical Dept., TWA Midcontinent Airport 8

Woodward, William W., 10901 Winner Road, Independence
Workman, Charles E., Professional Bldg. 6
Wortmann, Robert F., 6400 Prospect Ave. 32
Wright, R. Paul, Professional Bldg. 6
Wu, William Q., 63rd & Holmes Sts. 10
Yohe, Ruth M., 1710 Independence Ave. 6
Young, James E., 4635 Wyandotte St. 12
Young, Jesse W., 1401 Southwest Blvd. 3
Young, Paul R., 7424 Gregory Circle 33
Zellermayer, Jacob, 701 E. 63rd St. 10
Ziegler, Allen M., 1401 S. Market St., Holden
Ziegler, Dewey K., 425 E. 63rd St. 10
Zuber, Harold V., 6400 Prospect Ave. 32

### JASPER COUNTY MEDICAL SOCIETY
(Joplin)

Allen, David O., Medical Arts Bldg.
Barnett, Norman H., 25th & Jackson St.
Birsner, Frank H., 1717 River St., Carthage
Blanke, Otto T., 418 Wall St.
Burch, John E., Medical Arts Bldg.
Chesney, George W., 25th & Jackson St.
Cohle, Richard R., 116 W. 3rd St., Carthage
Craig, Irwin T., 25th & Jackson St.
Crawford, Archie L., Frisco Bldg.
Crispell, Lawrence S., 6th & Pearl Ave.
Curl, Howard, 410 Jackson St.
DeTar, Burleigh E., 410 Jackson St.
DeTar, Burleigh E. Jr., 410 Jackson St.
Douglass, Jesse E., 3560 Broadway, Kansas City
Eliscu, Juliette M., 2002 Jackson St.
Ferguson, Lewis H. Jr., Medical Arts Bldg.
Ferguson, Ralph L., Medical Arts Bldg.
Ferguson, Robert M., 110 N. Webb St., Webb City
Graves, F. Burton, 114 W. 32nd St.
Grubb, Paul H., 2509 Jackson St.
Hall, Marvin F., Medical Arts Bldg.
Hamilton, Eugene H., Medical Arts Bldg.
Holtzman, Samuel, Medical Arts Bldg.
Hornback, Edward R., Frisco Bldg.
Hurst, Wilfred W., Medical Arts Bldg.
Isbell, Charles H., Carthage
Jeans, Virgil, Medical Arts Bldg.
Kiehl, Katharine, Miners Bank Bldg.
Kirschman, Robert E., 2529 Jackson St.
Koehler, John W., Medical Arts Bldg.
Kuhn, John R. Jr., Frisco Bldg.
Laney, Ronald L., 3140 Ocean St., Carlsbad, Calif.
Longenecker, Joe L., 2503 Jackson St.
McIntire, Emery J., 201 W. 3rd St., Carthage
McNew, William T., Carthage
McPike, Lloyd H., Frisco Bldg.
Mack, Mary L., Address Unknown
Maddox, John D., 6th & Pearl St.
O'Brien, James A., 545 N. 6th St., Muskogee, Okla.
Paddock, Charles S., Medical Arts Bldg.
Papp, Sandor D., Medical Arts Bldg.
Patterson, Donald R., 2509 Jackson St.
Patterson, Grover S., 510 S. Main St., Carthage
Poor, Carl W., Neosho
Post, Winfred L., 617 Joplin St.
Powell, Robert G., 2329 Jackson St.
Royce, James J., Sarcoxie
Schoeberl, Cletus B., Medical Arts Bldg.
Schulte, Gregory A., 2125 Jackson St.
Scorse, Sidney W., 2509 Jackson St.
Smith, Roland T., Medical Arts Bldg.
Smith, William R., 211 E. Chestnut St., Carthage
Walker, Paul W., Medical Arts Bldg.
Webster, Roger W., 863 Cherry Way, Hayward, Calif.
Wetzel, Fred S. Jr., 1515 Hazel St., Carthage
Whitten, M. Foster, 616 W. Centennial St., Carthage
Wieman, Harry K., Medical Arts Bldg.
Wilson, Alice H., 1923 Sergeant St.
Wood, George H., 1515 Hazel St., Carthage
Wooldridge, Bart F., 25th & Jackson St.
Young, Calvin C. Jr., Medical Arts Bldg.

### JEFFERSON COUNTY MEDICAL SOCIETY

Allbee, Roger H., Crystal City
Bolgar, Bertalan, Festus
Carron, Joseph F., Festus
Commerford, James J., Crystal City
Donnell, Harold E., DeSoto
Donnell, Robert H., Crystal City
Donnell, Thomas A., DeSoto
Edwards, Waldo B., 11 N. Taylor Ave., Kirkwood
Fallet, Charles E., DeSoto
Judge, Walter T., Crystal City
Kozal, Francis L., Crystal City
McKinstry, Karl V., DeSoto
Mayfield, James L., Crystal City
Reich, Oliver F., Kimmswick
Rice, Carl E., Hillsboro
Rutledge, John F., Festus
Senn, Emmett J., Herculaneum
Yoskit, Harry, Festus

### JOHNSON COUNTY MEDICAL SOCIETY

Cooper, R. Lee, Warrensburg
Damron, Oscar H., Warrensburg
Folkner, A. L., Warrensburg
Frein, Donald E., Leeton
Gonzalez, M. Garza, Warrensburg
Grove, Gulph W., Knobnoster
Harkness, Harry, Warrensburg
Johnson, Charles S., Warrensburg
Jones, Keith D., Warrensburg
Lederer, Charles M., Warrensburg
Maxson, T. Reed, Warrensburg
Rawlins, Kelly, Holden

### KNOX COUNTY
(North Central Counties Medical Society)

### LACLEDE COUNTY
(Mid-Missouri County Medical Society)

### LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

Best, Robert, Higginsville
Boydston, Catherine, Odessa
Boydston, W. Wayne, Odessa
Brady, Hugh S., Concordia
Brasher, Ben H., Lexington
Cook, Thomas B., Richmond
Cope, Joseph S., Lexington
Crozier, Franklin A., Richmond
Davault, George K., Richmond
Fulkerson, Wilbur E., Higginsville
Goldberg, Isadore E., Braymer
Kelling, Douglas G., Waverly
Kelling, Jordan, Waverly
Koppenbrink, Walter E. Jr., Higginsville
Lissack, Edmund, Concordia
Liston, Odus, Oak Grove
McFadden, Gene A., Waverly
Martin, Wilfred E., Odessa
Payne, Bryan T., Lexington
Riley, Charles T., Richmond
Riley, Ralph W., Lexington
Ward, Joe, Lexington
Williams, John W., Oak Grove

### LAWRENCE COUNTY
(Ozarks Medical Society)

### LEWIS-CLARK-SCOTLAND COUNTIES MEDICAL SOCIETY

Bridges, James R., Kahoka
Davis, Landis Y., Canton
Ellery, William L., LaGrange
Watson, Cecil L., Kahoka

### LINCOLN-ST. CHARLES COUNTY MEDICAL SOCIETY
(St. Charles)

Berry, Paul T., Troy
Canty, Eugene J., 114 N. Main St.
Commerford, John F., 114 N. Main St.
Creech, Joseph C., Troy
Crider, Russell J., 222 S. 2nd St.
Damron, Edward O., Elsberry
DuMontier, R. J., O'Fallon
Fleming, Robert J., 120 Clay St.
Hammes, Romar E., 207 N. 5th St.
Hetlage, Louis P., Troy
Keller, Robert M., Wentzville
Kister, George E., 302 S. 2nd St.
Muenster, Vincent P., 222 S. 2nd St.
Neubeiser, Ben L., 206 Washington St.
Penn, Robert M., Silex
Poggemeier, William H. Jr., 302 S. 2nd St.
Randall, Don Q., 220 S. 6th St.
Roter, Alexander M., St. Charles
Rother, Paul H., 114 N. Main St.
Schneider, Vincent A., 207 N. 5th St.
Towers, Orville W., 114 N. Main St.
Yaeger, Gerald A., 9388 White Ave., St. Louis 17

### LINN COUNTY
(Grand River Medical Society)

### LIVINGSTON COUNTY
(Grand River Medical Society)

### McDONALD COUNTY
(Ozarks Medical Society)

### MACON COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

### MADISON COUNTY
(Mineral Area County Medical Society)

### MARIES COUNTY
(Mid Missouri County Medical Society)

### MARION-RALLS-SHELBY COUNTY MEDICAL SOCIETY
(Hannibal)

Archer, Perry C., Shelbyville
Bach, Lysle M., 1737 Harrison Hill
Birney, William P., 213 S. 5th St.
Burns, Francis R., 711 Grand Ave.
Canella, John M., 707 Broadway
Clisham, John F., B & L Bldg.
Fischer, Thomas J., 2910 St. Mary's St.
Foreman, Phillip B., 711 Grand Ave.
Francka, W. F., 603 Country Club Drive
Glascock, Donald W., Palmyra
Greene, Harry L., Holmes Bldg.
Hamlin, Wyeth, 711 Grand Ave.
Hardesty, Joel W., Holmes Bldg.
Johnson, Charles R., U.S.N.H. No. 926, FPO, San Francisco, Calif.
Landau, Daniel B., 711 Grand Ave.
Lanning, Robert J., 115 N. 5th St.
Latimer, Walter N. A., B & L Bldg.
Lichty, Charles A., Shelbina
Lucke, Eugene M., Court House
Murphy, Bernard L., 2000 Crescent Drive
Plowman, Edward M., 711 Grand Ave.
Purcell, P. L., Hull, Illinois
Rapp, Earl L., 711 Grand Ave.
Roller, Merrill J., 2910 St. Mary's St.
Smith, Ulysses S., 222 S. 5th St.
Smith, William J., 108 N. 3rd St.
Steele, James C. Jr., 711 Grand Ave.
Strong, Richard M., 711 Grand Ave.
Sultzman, Francis E., 115 N. 5th St.
Sweets, Henry H. Jr., 1406 Market St.
Walterscheid, John H., 1209 Broadway
Well, Julius W., Palmyra

### MERCER COUNTY
(Grand River Medical Society)

### MID-MISSOURI COUNTY MEDICAL SOCIETY
(Phelps-Crawford-Dent-Pulaski-Maries-Laclede Counties)

Andreassen, Dimil F., Rolla
Bass, Billy J., Salem
Baumann, Albert R., Steelville
Butts, James D., Rolla
Carrington, Howard W., Lebanon
Casey, Shederic A., Lebanon
Crosby, Alice S., Salem
Drake, Avery A., Rolla
Elders, Frank A. Jr., Cuba
Feind, Earl E., Rolla
Fisher, George E., Lebanon
Froelich, Rae W., Lebanon
Garrison, Theodore W., Camdenton
Hammler, Christiana V., St. James
Hart, Martin M., Salem
Holley, Donald B., Camdenton
Hope, James L., Lebanon
Hunt, Lloyd H., Salem
Hurst, Ben B., Lebanon
Jenkins, Paul A., Lebanon
Lytle, William R., Rolla
Miller, Clyde S., Waynesville
Mitchell, Roy E., Salem
Myers, James M., Rolla
Riffel, Gordon W., Bourbon
Russell, Barbara E., Rolla
Stricker, Emil A., St. James
Summers, Jacob H., Lebanon
Underwood, Millard K., Rolla
Young, Robert B., Rolla

## MILLER COUNTY MEDICAL SOCIETY

Buehler, Carl T. Jr., Eldon
Shelton, Edward O., Eldon

## MINERAL AREA COUNTY MEDICAL SOCIETY

**(St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve Counties)**

Appleberry, Charles H., Rivermines
Brennan, John A., Farmington
Bugg, Andrew F., Lordsburg, N. M.
Bull, Ben M., Ironton
Carleton, Charles E. Jr., Farmington
Chastain, Charles W., Farmington
Cresswell, George F., Potosi
Crouch, F. Richard, Farmington
Dennis, W. Paul, Flat River
Farrar, Charles B., 719 N. Middle St., Cape Girardeau
Foster, Jack L., Desloge
Gaebe, Harold C., Desloge
Gaskins, Charles W., Fredericktown
Gay, George, Ironton
Grossman, Marvin, Fredericktown
Harland, Robert E., Ironton
Haw, Marvin T. Jr., Bonne Terre
Hoctor, Emmett F., Farmington
Huckstep, Robert A., Farmington
Hunt, John W. Jr., Leadwood
Karraker, Alvan G., Farmington
Lanning, Richard C., Ste. Genevieve
Menne, Marvin C., Ironton
Michaelis, Charles E., Fredericktown
Mullen, Jack, Bonne Terre
Oliver, George A., Farmington
Roebber, Harry M., Bonne Terre
Slaughter, Shelby C., Fredericktown
Taylor, Van W., Bonne Terre
Warren, T. Thomas, Fredericktown
Watkins, George L. Jr., Farmington

## MISSISSIPPI COUNTY

**(Semo County Medical Society)**

## MONITEAU COUNTY MEDICAL SOCIETY

Fulks, Richard B., California
Gallagher, Lionel M., California
Kibbe, Edgar A., California
Latham, Kenyon S., California

## MONROE COUNTY

**(Chariton-Macon-Monroe-Randolph County Medical Society)**

## MONTGOMERY COUNTY MEDICAL SOCIETY

Andersen, Elmer J. T., Montgomery City
Byland, Samuel J., Wellsville
Helm, James O., New Florence
Hirsch, Albert, Vandalia

## MORGAN COUNTY MEDICAL SOCIETY

Gunn, Jack, Versailles
Kauffman, Ruth, Versailles
Lyle, Robert R., Versailles
Washburn, J. Loren, Versailles

## NEW MADRID COUNTY

**(Semo County Medical Society)**

## NEWTON COUNTY

**(Ozarks Medical Society)**

## NODAWAY-HOLT-ATCHISON-GENTRY-WORTH COUNTIES MEDICAL SOCIETY

Bare, Edward F., Tarkio
Bauman, Henry C., Maryville
Blacklock, David E., King City
Byland, Benjamin F., Maryville
Carlin, Albert L., Stanberry
Carpenter, Wallace, Rock Port
Cossins, Carlos E., State Hospital No. 2, St. Joseph
Dunshee, Robert E., Maryville
Humphrey, James, Mound City
Imes, Elvin D., Maryville
Jackson, William R., Maryville
Kirk, Charlie W., Hopkins
Matteson, Frank B., Grant City
Niedermeyer, Edward L., Tarkio
Perry, David C., Mound City
Wanamaker, John M., Rock Port
Wempe, G. Raymond, Maryville

## NORTH CENTRAL COUNTIES MEDICAL SOCIETY

**(Adair-Schuyler-Knox-Sullivan-Putnam Counties)**

Cramb, Arthur B., 711 C. E. Orange St., Lakewood, Fla.
English, Milton T. Jr., Kirksville
Freeman, Spencer L., Kirksville
Grim, Edward M., Kirksville
Hart, Pearl V., Coatsville
Hasselblad, Oliver W., 297 Park Ave. S., New York 11, N. Y.
Hilton, Paul E., Kirksville
Holman, Jurney H., 2516 N. Pecan St., Nacogdoches, Tex.
Isom, Waldo B., Knox City
Jones, John B., Kirksville
Luman, Frank E., Edina
Stickler, Ralph O., Kirksville
Sullivan, William J., V.A. Hospital, Providence 8, R. I.
Tarvydas, Francis, Edina
Wimp, J. J., Kirksville

## OREGON COUNTY

**(South Central Counties Medical Society)**

## OSAGE COUNTY

**(Unorganized)**

## OZARK COUNTY

**(South Central Counties Medical Society)**

## OZARKS MEDICAL SOCIETY

**(Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald Counties)**

Alsup, Frederick F., Box 276, Kalispell, Mont.
Anderson, Paul B., Neosho
Aubin, Francis W., Branson
Bailey, Alan B., Mount Vernon
Blankenship, George W., Neosho
Bowman, Melvin C., Neosho
Brasher, Charles A., Mount Vernon
Brown, Frederick B., Aurora
Burney, Wallace S., Miller
Capetti, Alex P., Crane
Carter, James R., Neosho
Coffman, Esther E. L., 1514 13th St. N., Lakeworth, Fla.
Cohnberg, Rosellen E., Monett
Cowan, R. D., Aurora
Davis, Paul C., McLoud, Okla.
Donley, Robert R., Monett
Edwards, Francis L., Monett
Evans, Harry T., Branson
Gillespie, Roy, Branson
Glass, William J. Jr., Monett
Glover, Kenneth, Mount Vernon
Graves, Arthur J., Mount Vernon
Hamilton, William P., Aurora
Hellweg, Charles E., Mount Vernon
Hobbs, George H., Mount Vernon
Imes, Clifford H., 11144 Harris Ave., Lynwood, Calif.
Kelsey, Kenneth L., Aurora
Kenney, Roy E., Neosho
Kerr, Frank T., Monett
Langeluttig, Harry V., Mount Vernon
Lentz, Harold C., Neosho
McCallum, A. J. C., Aurora
Magness, William C., Branson
Maples, Floyd H., 1923 Ventura St., Springfield
Mars, Hartley F., Forsyth
Morrison, T. A., Aurora
Newman, Mary Jane N., Cassville
Olive, George C., Neosho
Price, Charles H., Cassville
Reynolds, James R., Neosho
Roper, Stanley D., Ozark
Schultz, Loraine E., Branson
Shumate, L. St. Clair, Reeds Spring
Spears, Charles A., Branson
Sweany, Henry C., Mount Vernon
Taylor, Leo T., Neosho
Threadgill, Jesse M., Forsyth
Whitehead, Frank F., Neosho
Wilson, Daniel R., Mount Vernon
Wommack, Fred L., Crane
Yates, J. Lewis, Mount Vernon

## PEMISCOT COUNTY MEDICAL SOCIETY

Aquino, Philip J., Caruthersville
Bryant, William O., Hayti
Cain, Charles F., Caruthersville
Caldwell, Jacob D., Hayti
Chapman, J. R., Steele
Cook, O. W., Caruthersville
Cooper, Lawrence E., 1274 Hanton St., Fort Myers, Fla.
Denton, Levi D., Hayti
Grable, James, Portageville
Gubin, Alan S., Caruthersville
Hensley, Daniel R., Lilbourn
Limbaugh, Walter R., Hayti
McCoy, Warren R., Caruthersville
McKaskle, Clarence W., Caruthersville
Morris, Clyde L., Caruthersville
Painter, Andrew E., Portageville
Painter, Lattie B. Jr., Portageville
Shirey, Arnold G., Hayti
Smith, Robert S., Portageville
Strittmatter, James C., Caruthersville

## PERRY COUNTY MEDICAL SOCIETY

Carron, Oscar A., Perryville
DeGenova, Gerard H., Ste. Genevieve
Fairchild, James F., Perryville
Feltz, Lawrence W., Perryville
Fischer, Theodore, Altenburg
Legner, Stanley G., Perryville
Lutkewitte, Joseph F., Ste. Genevieve
McDermott, Alfred E., Perryville
Miller, Oliver J., Cape Girardeau
Utterman, William F., Perryville

## PETTIS COUNTY MEDICAL SOCIETY

**(Sedalia)**

Beckemeyer, William A., 500 W. 16th St.
Bess, William E., 210 S. Ohio St.
Boger, James W., 500 W. 16th St.
Brady, Charles H., Gordon Bldg.
Brazos, John C., Smithton
Campbell, A. J., 312 S. Ohio St.
Carlisle, John B., 1019 W. 6th St.
Daum, Harold F., Bothwell Mem. Hospital
Dyer, David P., 2511 Stephenson St.
Edwards, D. R., 700 S. Limit Ave.
Ewert, John O., 412 S. Ohio St.
Fisher, Stanley D., Sedalia
Gonser, Karl B., 101 S. Ohio St.
Hite, Henry A., Green Ridge
Hopkins, Thomas J., 700 S. Limit Ave.
Hopkins, T. Spencer, 1609 S. Limit Ave.
Lamy, John E., 509 W. Broadway
Long, Frank B., Gordon Bldg.
Lowe, Alvin L., 1425 S. Grand Ave.
Maddox, Albert R., 116 W. Main St.
Osborne, Charles D., 710 W. Broadway
Parkhurst, Charles L., Houstonia
Proctor, Donald C., 700 S. Limit Ave.
Rhodes, Euhlan L., Warsaw
Roberts, Paul A., Sweet Springs
Rodeman, John M., Gordon Bldg.
Siegel, Carl D., 1216 W. 18th St.
Siegel, Peter V., Smithton
Stauffacher, C. Gordon, 700 S. Limit Ave.
Stewart, Robert H., Bothwell Memorial Hospital
Walter, Archie L., 500 W. 16th St.
Worley, Charles A., Sweet Springs

## PHELPS COUNTY

**(Mid-Missouri County Medical Society)**

## PIKE COUNTY MEDICAL SOCIETY

Andrae, Robert L., Louisiana
Biggs, James B., Bowling Green
Christensen, Roger F., Louisiana
Holcomb, John K., Louisiana
Hooker, John H., 709 Riverview Drive, Alton, Ill.
Lewellen, Charles H., Louisiana
Martin, W. Joe, Louisiana
Middleton, John W., Louisiana
Scott, Clive D., Louisiana
Wilcoxen, William B., Bowling Green

## PLATTE COUNTY MEDICAL SOCIETY

Calvert, Lewis C., Weston
Jennings, Ethlyn C., Box 9051, Kansas City 50
Kimball, I. W., Parkville
Parker, H. Graham, Platte City
Robinson, John A., Edgerton
Thurman, Hill C., Parkville

## POLK COUNTY

**(Dallas-Hickory-Polk County Medical Society)**

## PULASKI COUNTY

**(Mid-Missouri County Medical Society)**

### PUTNAM COUNTY
(North Central Counties Medical Society)

### RALLS COUNTY
(Marion-Ralls-Shelby County Medical Society)

### RANDOLPH COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

### RAY COUNTY
(Lafayette-Ray County Medical Society)

### REYNOLDS COUNTY
(Mineral Area County Medical Society)

### RIPLEY COUNTY
(Butler-Wayne-Ripley County Medical Society)

### ST. CHARLES COUNTY
(Lincoln-St. Charles County Medical Society)

### ST. CLAIR COUNTY
(West Central Missouri Medical Society)

### ST. FRANCOIS COUNTY
(Mineral Area County Medical Society)

### STE. GENEVIEVE COUNTY
(Mineral Area County Medical Society)

### ST. LOUIS MEDICAL SOCIETY
(St. Louis)

Abel, Oliver III, 52 Maryland Plaza 8
Abell, Walter E., 2253 S. 39th St. 10
Abrams, Morris, 4919 Forest Park Blvd. 8
Acker, Harry L., 6150 Oakland Ave. 10
Ackerman, Lauren V., 600 S. Kingshighway Blvd. 10
Adams, James T., 40 Delafield Rd., Fort Leonard Wood
Adler, Benard C., 500 N. Skinker Blvd. 30
Agress, Harry, 634 N. Grand Blvd. 3
Ahern, Archibald M., 3915 Watson Road 9
Ahlering, George H., 950 Francis Place 5
Aitken, Louis F., 3720 Washington Blvd. 8
Albrecht, Franklin H., 245 Union Blvd. 8
Alden, Arthur M., 906 Olive St. 1
Aldrich, James T., 2621 Franklin Ave. 6
Alexander, Harry L., 52 Maryland Plaza 8
Allen, Henry C., Clayton Medical Bldg. 5
Allen, Hollis N., 634 N. Grand Blvd. 3
Allen, Melvin A., 3701 Grandel Square 8
Allen, Willard M., 630 S. Kingshighway Blvd. 10
Allen, William E. Jr., 720 N. Sarah St. 8
Altheide, J. Paul, 607 N. Grand Blvd. 3
Alvis, Bennett Y., 100 N. Euclid Ave. 8
Alvis, Edmund B., 100 N. Euclid Ave. 8
Anstey, George, 4660 Maryland Ave. 8
Apicella, Frank V., 762 W. Canterbury Road 32
Arneson, A. N., 457 N. Kingshighway Blvd. 8
Arney, William G., 16 Hampton Village Plaza 9
Aronberg, Lawrence M., 2120 S. Warson Road 24
Arzt, Franz, 1790 Las Olas Blvd., Ft. Lauderdale, Fla.
Auer, Arthur I., 8505 Gannon Ave. 32
AufderHeide, G. Russell, 2326 Noll Drive 36
Austin, Martin G., 119 Summit Place 19
Aylward, Howard J., 410 Dielman Road 32
Azarnoff, Daniel L., 6954 Amherst Ave. 30
Azuma, Nobutaka, 3901 Tholozan Ave. 16
Azzouni, J. N., 8816 Gravois Ave. 23
Backer, Matthias H. Jr., 3923 Watson Road 9
Baggott, Michael G., 3010 Nameoki Road, Granite City, Ill.
Bailey, Drennan, 6356 Clayton Road 17
Bailey, Frank A., 3654 S. Grand Blvd. 18
Bailey, Fred W., 4610 23rd Ave., N. St. Petersburg, Fla.
Baker, Robert E., 1319 Grant Road 19
Balazs, Karl J., 3623 Cleveland Ave. 10
Bandle, Donald F., 5400 Arsenal St. 39
Banet, Samuel R., 7301 St. Charles Rock Road 33
Banton, William C., 2917 St. Louis Ave. 6
Barden, Frank W., 41 Beaver Drive, Creve Coeur
Bardenheier, J. Phil, 6400 Morganford Road 16
Barker, Jesse W., 1504 S. Jefferson Ave. 4
Barrett, Scott R., 5086 Easton Ave. 13
Bartels, Leo G., 906 Olive St. 1
Bartlett, Robert W., 100 N. Euclid Ave. 8
Bartlett, Willard Jr., 634 N. Grand Blvd. 3
Bartnick, Mitchel L., 7615 S. Broadway 16
Bassett, Robert B., 5427 Delmar Blvd. 12
Bauer, John D., Northland Medical Bldg. 36
Bauer, Maria, 1935 Edison Ave., Granite City, Ill.
Bauer, Otto, 1935 Edison Ave., Granite City, Ill.
Baumgarten, Walter Jr., 3720 Washington Blvd. 8
Bawell, Malcolm B., 4660 Maryland Ave. 8
Beare, J. Byron, 3720 Washington Blvd. 8
Becke, William G., 3720 Washington Blvd. 8
Becker, Bernard, 640 S. Kingshighway Blvd. 10
Becker, Edward J., 906 Olive St. 1
Becker, George H., 4500 Olive St. 8
Becker, Stanley C., 8110 Roxburgh Drive 24
Beckette, Edmund S., 950 Francis Place 5
Beckman, Donald E., 4205 Virginia Ave. 11
Behrens, Donald T., 6 Thorndell Drive 17
Behrens, Gerald L., 3 Colonial Court 24
Belew, Joe E., APO 178, 11 Field Hospital, New York, N. Y.
Bell, Robert M., 3720 Washington Blvd. 8
Benincasa, Anthony V., 3731 Goodfellow Blvd., 20
Benjamin, Durand, 7430 Virginia Ave. 11
Bennett, Thomas T., 4500 West Pine Blvd. 8
Berard, Louis N., 812 Olive St. 1
Berg, Leonard, 52 Maryland Plaza 8
Berg, Ralph, 3203 S. Grand Blvd. 18
Bergman, Hugo F., 3720 Washington Blvd. 8
Bergner, Grace E., 114 N. Taylor Ave. 8
Berland, Harry I., 812 Olive St. 1
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Berman, William, 4919 Forest Park Blvd. 8
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Berry, John W., 950 Francis Place 5
Bersche, Bertram L., 5214 Pernod Ave. 9
Bettonville, Paul J. Jr., 6331 Pershing Ave. 30
Bilsky, Nathan, 2739 N. Grand Blvd. 6
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Bindbeutel, Donald A., 630 Westborough Place 19
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Birdsall, Thomas C., 4660 Maryland Ave. 8
Birsner, Louis J., 634 N. Grand Blvd. 3
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Blair, Vilray P. Jr., 9 Stoney Brook Lane 24
Blalock, William N., 114 N. Taylor Ave. 8
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Bock, Lux H., 1504 S. Grand Blvd. 4
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Boedeker, Roy V., 100 N. Euclid Ave. 8
Boemer, Lilburn C., 3720 Washington Blvd. 8
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Bohne, William R., 4500 Olive St. 8
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Bolton, Robert L., 829 Medical Group, Larson AFB, Wash.
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Bonfanti, Albert L., 3225 Longfellow Blvd. 4
Boswell, John R., 12918 Topping Estates 31
Bowdern, Edward H., 634 N. Grand Blvd. 3
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Bowersox, Warren A., 100 N. Euclid Ave. 8
Bowles, G. Robert, 5525 Enright Ave. 12
Boyd, Arthur M., 1703 S. Grand Blvd. 4
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Bradley, Richard V., 110 S. Central Ave. 5
Bremser, Harry L., 1105 Tower Grove Ave. 10
Brennan, George A., 3606 Gravois Ave. 16
Brennan, Robert A., 3606 Gravois Ave. 16
Brennan, Robert V., 12048 Berkley Manor Drive 31
Brereton, Robert L., 206 N. Clay Ave. 35
Bricker, Eugene M., 100 N. Euclid Ave. 8
Brittingham, Thomas E., 6242 Waterman Ave. 5
Brodeur, Armand E., 141 Horseshoe Drive 22
Bronson, Shael S., 100 N. Euclid Ave. 8
Brookes, Henry S. Jr., 37 Algonquinwood Place 22
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Broun, Goronwy O. Jr., 6359 Waterman Ave. 5
Brown, E. Eugene, 379 N. Taylor Ave. 8
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Brown, James L., 5400 Arsenal St. 39
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Bruce, Helen L., 3263 Hawthorne Blvd. 4
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Busch, Anthony K., Hampton Village Plaza 9
Butcher, Harvey R. Jr., 4960 Audubon Ave. 10
Byars, Louis T., 100 N. Euclid Ave. 8
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Sterkel, Richard L., 634 N. Grand Blvd. 3
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Stewart, John W., 4660 Maryland Ave. 8
Stewart, Wendell K., 9098 W. Swan Circle 17
Stindel, Charles E., 341 Violet Lane 19
Stokes, James M., 4960 Audubon Ave. 10
Stolar, Jacob, 508 N. Grand Blvd. 3
Stone, Charles A., Northland Medical Bldg. 36
Stoneman, William III, 5217 Westminster Place 8
Strauss, Arthur E., 3720 Washington Blvd. 8
Strominger, Donald B., 950 Francis Place 5
Stryker, Garold V., 634 N. Grand Blvd. 3
Stryker, William I., 9 Elm Ave. 22
Stuart, Wallace, 405 Ranch Drive, Manchester
Stutsman, Albert C., 3720 Washington Blvd. 8
Sudholt, Alfred F. Jr., 111 Church Road 35
Sullivan, Clement J., 4161 Lindell Blvd. 8
Sullivan, James F., 5212 Webster St., Omaha, Neb.
Summers, John B., 3624 S. Broadway 18
Summers, Thomas F., 3624 S. Broadway 18
Sunderman, Raymond C., 4943 Natural Bridge Road 15
Sunshine, Herbert, 6342 San Bonita Ave. 5
Susman, Noah, 462 N. Taylor Ave. 8
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Swope, Joseph A., 4230 Exeter Ave. 19
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Taylor, E. T., 2602 N. Union Blvd. 13
Taylor, Helen L., 5535 Delmar Blvd. 12
Ternberg, Jessie L., 600 S. Kingshighway Blvd. 10
Tess, Melvin J. H., 4118 W. Florissant Ave. 15
Thale, Thomas, 16 Hampton Village Plaza 9
Thoma, George E. Jr., 3915 Watson Road 9
Thomas, Charles S., 906 Olive St. 1
Thomasson, Mary W., 415 Midvale Ave. 30
Thomasson, Robert E., 100 N. Euclid Ave. 8
Thompson, J. William, 4952 Maryland Ave. 8
Thompson, Lawrence D., 634 N. Grand Blvd. 3
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Tindall, Robert N., 6500 Chippewa St. 9
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Uhlemeyer, Henry A., 5203 Chippewa St. 9
Ulett, George A., 54 Picardy Lane 24
Ungvari, Joseph C., 3284 Ivanhoe Ave. 9
Utley, James H., 4448 Enright Ave. 8
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Venable, H. Phillip, 2841 N. Union Blvd. 15
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Wagenbach, William F., 4717 Morganford Road 16
Wald, Stanley M., 457 N. Kingshighway Blvd. 8
Walker, Francis S., 4161 Lindell Blvd. 8
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Walsh, James W., 3720 Washington Blvd. 8
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Webb, Marion A., 4500 Olive St. 8
Webb, Paul B., 1915 Sidney St. 4
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Webb, Paul K., 721 Olive St. 1
Weber, Eugene P., 3720 Washington Blvd. 8
Wegner, Carl R., 630 S. Kingshighway Blvd. 10
Weiler, Thomas J., 634 N. Grand Blvd. 3
Weinel, Francis G., 5205 Chippewa St. 9
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Weintraub, Solomon A., 4500 Olive St. 8
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Feldaker, Robert M., 817 N. McKnight Road 32
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Fingerhood, Marvin G., 1434 Chambers Road 35
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Finkel, Barney W., 6510 W. Florissant Ave. 20
Finley, Freeman L., 2475 Hartland Ave. 14
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Fletes, James W., 5601 Lindell Blvd. 12
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Fox, Leon J., 634 N. Grand Blvd. 3
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Frederick, Vincent L., 601 S. Brentwood Blvd. 5
Freiheit, Harold J., 3 Devondale Lane 31
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Froelich, Edwin J., 7321 Overbrook Drive 21
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Gaines, Quentin M., 136 W. Mermod St. 22
Gale, Philip R., 7811 Carondolet Ave. 5
Gall, Ira, 201 S. Central Ave. 5
Gaston, Ralph E., 1 Lynnbrook Road 31
Gaunt, Frank P., 203 W. Cedar Ave. 19
Gay, Elizabeth K., 2221 Duchess Drive 30
Gearhart, Wilbur H., 25 Graeson Court 41
Gibstine, Marvin H., 10517 St. Charles Rock Rd. 14
Gieselman, Ralph V., 4952 Maryland Ave. 8
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Goldman, Hyman J., 457 N. Kingshighway Blvd. 8
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Goodrich, Harold A., 19 E. Lockwood Ave. 19
Gowen, Leo F., 1114 Cheshire Lane 19
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Graeser, Richard G., Arcade Bldg. 1
Gray, Walter C., 8711 St. Charles Road 14
Green, Manuel E., 1625 Tower Grove Ave. 10
Greenman, Marshall B., 950 Francis Place 5
Griot, Albert J., 3109 S. Grand Blvd. 18
Gronau, Axel R., 7062 Waterman Ave. 30
Grundmann, William H., 634 N. Grand Blvd. 3
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Hale, Tyre H., 4903 Delmar Blvd. 8
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Hans, Willard J., 4335 Virginia Ave. 11
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Harrington, William J., 600 S. Kingshighway Blvd. 10
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Helbing, Edward J., 950 Francis Place 5
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Hengen, Henry E., 11223 St. Charles Rock Road, Bridgeton
Hershey, Falls B., 6621 Waterman Ave. 30

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Holscher, Edward C., 41 N. Central Ave. 5
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Jick, Sidney, 457 N. Kingshighway Blvd. 8
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Jones, James B., 9335 Sonora Ave. 17
Jones, Victor, 2240 St. Clair Ave. 17
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Kahn, Lawrence, 150 N. Meramec Ave. 5
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Karsh, Robert S., 7514 Oxford Drive 5
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Kloeppel, Carl F., 110 S. Central Ave. 5
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Koch, Robert E., 35 N. Central Ave. 5
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Kurth, Robert K., 6500 Chippewa St. 9
Kuttner, Marianne, 8515 Delmar Blvd. 24
Lansche, W. Edward, 809 Leber Drive 22
Larkin, Rosemary R., 2244 Union Road 25
Lauber, Joseph J., 17 Sona Lane 41
Leonhardt, Erwin M., 3946 Jamieson Ave. 9
Lerman, George S., 6318 Southwood Ave. 5
Lerner, Abe F., 7545 Parkdale Ave. 5
Leslie, Charles H., 209 S. Kirkwood Road 22
Levey, Simon A., 8334 Delcrest Drive 24
Levin, Marvin E., 7818 Stanford Ave. 30
Lewin, Wilbur H., 906 Olive St. 1
Lipschitz, Ervin, 225 S. Meramec Ave. 5
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Long, Frank B., 100 N. Euclid Ave. 8
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Loving, B. Rush, Box 154, Ballwin
Luedde, Fullerton W., 35 N. Central Ave. 5
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Lund, Herluf G., 16 Hampton Village Plaza 9
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McKee, Oliver A., N. Kirkwood Road & Washington 22
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McManamon, Thomas V., 525 St. Francois St., Florissant
McMurray, Herbert C., Manchester
McNalley, Frank P., 950 Francis Place 5
McNalley, Michael, 950 Francis Place 5
Magee, Charles D., 418 Olive St. 2
Magee, William E., 4952 Maryland Ave. 8
Magidson, Joseph, 615 Forest Court 5
Magness, Guy N., 6651 Enright Ave. 30
Mahe, George A., 8039 Park Drive 17
Manganaro, Frank J., 1617 S. Brentwood Blvd. 17
Marcus, Morris D., 607 N. Grand Blvd. 3
Margolis, Richard M., 1630 Bay Meadows, Florissant
Marmor, William A., 607 N. Grand Blvd. 3
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Mendonsa, Elsa L., 504 N. Central Ave. 5
Merrims, Theodore, 7873 Wayne Ave. 30
Merritt, Burch A., 7309 Natural Bridge Road 21
Merz, Jean J., 117 Frontenac Forest 31
Meyer, James E., Manchester
Mezera, Raymond A., 7135 Forsyth Blvd. 5
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Miles, Paul W., 100 N. Euclid Ave. 8
Miller, Charles Jr., 206 N. Fillmore Ave. 22
Minnihan, Robert W., 6327 Lynbrook Drive 23
Missey, Wilburn C. Jr., 12047 Conway Road 31
Molden, Charles A., 36 Bellerive Acres 21
Monat, Seymour, 100 N. Euclid Ave. 8
Montes-de-Oca, Julio, 6115 Clayton Ave. 10
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Moore, William E., 7315 Pasadena Blvd. 21
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Murphy, John C., 3720 Washington Blvd. 8
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Noller, Henry W., 9440 Midland Ave. 14
Nuetzel, John A., 950 Francis Place 5
Nussbaum, Robert A., 3701 Grandel Square 8
Oakley, John E., 601 S. Brentwood Blvd. 5
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O'Connor, Robert J., 751 St. Francois St., Florissant
O'Keefe, Joseph D., 135 W. Adams Ave. 22
O'Neal, Patricia, 4580 Scott Ave. 10
Ott, Harold J., 2816 Sutton Ave. 17
Ottensmeyer, Charles D., 2035 Goodale Ave. 14
Paddock, Richard, 6154 Westminster Place 12
Paris, William H., 3121 N. Grand Blvd. 7
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Parker, Brent M., 4960 Audubon Ave. 10
Pawol, S. E., 2573 Woodson Road 14
Peebles, J. B. Jr., 135 W. Adams St. 22
Pennoyer, James, 117 Plant Ave. 19
Perry, H. Mitchell, 31 Hill Drive 22
Perry, William D., 100 N. Euclid Ave. 8
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Pilla, Lawrence A., 6833 Graham Road 34
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Reiss, Eric, 6326 Waterman Blvd. 5
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Rennard, Marvin, 4652 Maryland Ave. 8
Repp, Theodore J., 9311 Duenke Drive 37
Reynolds, Fred, 4960 Audubon Ave. 10
Riggio, Salvatore N., 9901 Gravois Road 23
Roberts, Harold K., 110 S. Central Ave. 5
Roberts, John P., Barrett Station Road 22
Roberts, John R., 100 N. Euclid Ave. 8
Robertson, Frank G., 634 N. Grand Blvd. 3
Robinson, Edith C., 2 Brear Oak 32
Roblee, Melvin A., 101 S. Meramec Ave. 5
Rogers, C. H., 812 Olive St. 1
Rogers, John A., 7720 Delmar Blvd. 30
Rohlfing, Edwin H., 8230 Forsyth Blvd. 24
Rolufs, Lloyd S., 135 W. Adams Ave. 22
Roodman, Herman J., 15 N. Brentwood Blvd. 5
Roos, Albert, 1040 Sylvan Place 22
Rosecan, Marvin, 100 N. Euclid Ave. 8
Rosenbaum, Herbert E., 100 N. Euclid Ave. 8
Rosenberg, Henry E., 1467 N. Union Blvd. 13
Rosenstein, Daniel L., 216 S. Kingshighway Blvd. 10
Ross, Herman C., 1695 Brentwood Blvd. 17
Roth, Daniel. 1087 N. Hanley Road 30
Roufa, Joseph F., 539 N. Grand Blvd. 3
Rouse, Ernest T., 100 N. Euclid Ave. 8
Rubenstein, Melvin, 4919 Buckingham Court 8
Rubin, Robert, 8515 Delmar Blvd. 30
Ruhling, Rudy, 5203 Chippewa St. 9
Ryan, John J., 28 Ridgetop 17
Salisbury, William J., 445 Bellerive Blvd. 11
Saltzstein, Sidney, 1460 Oriole Place 17
Schaan, Robert C., 9293 Watson Road 26
Schattyn, Martyn, 539 N. Grand Blvd. 3
Schechter, Samuel E., 8000 Bonhomme Road 5
Scheele, Paul M., 411 N. Kirkwood Road 22
Schlansky, Seymour M., 7247 Delmar Blvd. 30
Schluer, Elmer P., 3720 Washington Blvd. 8
Schmidt, Edmund M., 6704 W. Florissant Ave. 20
Schneider, Sam, 4652 Maryland Ave. 8
Schopp, Alvin C., 634 N. Grand Blvd. 3
Schultz, Samuel, 2813 Watson Road 9
Schuman, Stanley H., 1427 E. Park Place, Ann Arbor, Mich.
Schupmann, Gustav A., 819 Locust St. 1
Schwartz, Melvin M., 4652 Maryland Ave. 8
Schwartzman, Bernard, 4652 Maryland Ave. 8
Seabaugh, Ottis D., 105 W. Lockwood Ave. 19
Seabold, John A., 408 Mission Court 30
Shatz, Burton A., 4652 Maryland Ave. 8
Shobe, Frank O., 4500 W. Pine Blvd. 8
Silverberg, Charles, 45 Rio Vista Drive 24
Simril, Wayne A., 35 N. Central Ave. 5
Sisk, James C., 110 S. Central Ave. 5
Skilling, David M. Jr., 18 S. Kingshighway Blvd. 8
Skinner, John S., 31 Willow Hill Road 24
Smit, Herbert M., 539 N. Grand Blvd. 3
Smith, George E., 637 Tarrymore Lane 22
Smith, William A., R. 1, Box 122M., Somerton, Ariz.

Sommer, Ross B., 100 N. Euclid Ave. 8
Speno, Angelo A., 1071 Raritan Drive 19
Spitz, Milton A., 1108 N. 20th St., Milwaukee 3, Wisc.
Spitzer, Ernest, 6637 Kingsbury Blvd. 30
Spoeneman, Marlin C., 7380 Overbrook Drive 21
Staehle, Melvin E., 7124 Natural Bridge Road 20
Stein, Harry J., 6917 W. Florissant Ave. 20
Stein, Leonard A., 2618 Oregon Ave. 18
Steiner, Alexander J., 3720 Washington Blvd. 8
Stephens, William A., 462 N. Taylor Ave. 8
Sterling, Charles E., 8105 Page Blvd. 30
Sterling, John A., 7266 Manchester Ave. 17
Stevens, Robert W., 9311 Duenke Drive 37
Stewart, Frances H., 7161 Delmar Blvd. 30
Stickle, A. W., 6829 Clayton Ave. 10
Stocking, Lyman C., 14 Sweetbriar Lane 22
Strauchen, Gilbert W., 337 W. Lockwood Ave. 19
Stude, William C., 16 Hampton Village Plaza 9
Stuebner, Roland W., 35 N. Central Ave. 5
Suba, Antonio R., 4500 Olive St. 8
Susman, Irvin C., 216 S. Kingshighway Blvd. 10
Sutphin, John B., 111 Church Road 35
Sutter, Richard A., 7215 Greenway Ave. 30
Tashma, Sigmund, 5847 Pershing Ave. 12
Teiber, Frederick W., 3201 Washington Blvd. 3
Thiele, Belmont R., 10261 Thornwood Drive 24
Thiele, O. K., 340 N. Main St., St. Charles
Tobias, Norman, 700 S. Meramec Ave. 5
Tomlinson, William L., 357 Violet Lane 19
Torin, Bernice A., 951 Old Bonhomme Road 32
Townsend, James A., 915 DeMun Ave. 5
Townsend, Vincent F., 7532 Byron Place 5
Tremain, E. E., 2901 Big Bend Blvd. 17
Treiman, Robert C., 7 Radnor Road 22
Trueblood, Alva C. Jr., 325 N. Kirkwood Road 22
Trunko, Leo, 1900 Telegraph Road 23
Tureen, Louis L., 457 N. Kingshighway Blvd. 8
Turner, James K., 101 S. Meramec Ave. 5
Ulett, Pearl C., 54 Picardy Lane 24
Valach, Frank J., 1617 S. Brentwood Blvd. 17
Vatterott, Paul B., 10300 St. Charles Rock Road 14
Vinyard, Paul, 3718 Olive St. 8
Vitale, Anthony J., 7130 Natural Bridge Road 34
Vitale, Nicholas S., 7130 Natural Bridge Road 34
Vizgird, J. J., 3511 University Ave. 7
Vollmar, Clarence J., 8787 Big Bend Blvd. 19
Votaw, Robert E., 10 Warson Ter. 24
Walker, Harvey Jr., 6924 Waterman Ave. 30
Walker, Willard B., 110 S. Central Ave. 5
Wall, Albert, 5322 Helen Ave. 20
Walther, Roy A. Jr., 7 High Acres 32
Waters, E. B. 126 E. Jefferson Ave. 22
Weber, J. R., 135 W. Adams St. 22
Weber, Sol, 607 N. Grand Blvd. 3
Weber, William K., 4323 Gladwyn Drive, Bridgeton
Weinhaus, Robert S., 7165 Delmar Blvd. 30
Weisbrod, Wilfred B., 1025 North & South Road 30
Weisman, Renate D., 10517 St. Charles Rock Road 14
Weisman, Sol, 4652 Maryland Ave. 8
Weitman, Maximilian, 3530 Arsenal St. 18
Wenneker, Alvin S., 8112 Delmar Blvd. 30
Werth, Duncan S., 233 N. Sappington Road 22
West, Joseph W., 906 Olive St. 1
Westrup, Arthur W., 8540 E. Big Bend Blvd. 22
Westrup, Ellsworth A., 8540 Big Bend Blvd. 19
Whitener, Miles C., 8923 Midland Blvd. 14
Whitener, Paul R., 8923 Midland Blvd. 14
Wiedershine, Leonard J., 634 N. Grand Blvd. 3
Williamson, O. E., 6336 Clayton Road 17
Wissmath, Frank S., 35 N. Central Ave. 5
Wittler, Harry A., 2817 Manderly Drive 17
Wood, James A., Clayton Medical Bldg. 5
Wolff, Harold D., 1420 Grattan St. 4
Wulff, George J. L. Jr., 6 Graybridge Lane 24
Wyatt, Louis C., 134 W. Adams Ave. 22
Yanow, Mitchell, 201 S. Central Ave. 5
Yost, Walter B., 5351 Delmar Blvd. 12
Young, John S., 3400 N. Kingshighway Blvd. 15
Zimmerman, Herbert B., 8026 Comstock Drive, Olivette
Zuckner, Jack, 150 N. Meramec Ave. 5
Zwirn, Benjamin H., Northland Medical Bldg. 36

### SALINE COUNTY MEDICAL SOCIETY

Aiken, George A., Marshall
Aiken, Richard F., Marshall
Blalock, Robert W., Marshall
Bowdish, Palmer R., Marshall
Day, Anthony B., Marshall
Haynes, Robert C., Marshall
Johns, G. A., 506 Sudbrook Road, Pikesville 8, Md.
Jones, Ralph H., 420 16th Ave. S.W., Rochester, Minn.
Knipschild, B. F., Marshall
Lawless, Charles L., Marshall
Lawrence, John R., Marshall
McBurney, Alexander A., Mary Hitchcock Mem. Hospital, Hanover, N. H.
McBurney, C. A., Slater
McCorkle, E. Lee, Marshall
Madison, Waite H., 4646 Benton Blvd., Kansas City 30
Mead, Samuel T., Slater
Mullinax, Orr, Marshall
Nix, Winston K., Marshall
Reid, James A., Marshall
Roehrs, Marvin E., Marshall
Sullivan, B. Hazard, Miami

### SCHUYLER COUNTY
**(North Central Counties Medical Society)**

### SCOTLAND COUNTY
**(Lewis-Clark-Scotland County Medical Society)**

### SCOTT COUNTY
**(SEMO County Medical Society)**

### SEMO COUNTY MEDICAL SOCIETY
**(Stroddard-New Madrid-Mississippi-Scott Counties)**

Blanton, J. C., Sikeston
Bruce, Leo A., Sikeston
Buckthorpe, Thelma C., Sikeston
Comeau, Richard, Dexter
Critchlow, William C., Sikeston
Davis, Wilbur L., Charleston
Dernoncourt, John E., Charleston
Dieckman, William C., Dexter
Dunaway, Howard A., Sikeston
Ellis, Burnett E., Gideon
Ferguson, Wilson J., Sikeston
Finney, William O., Chaffee
Frazier, Robert L., Charleston
Heeb, Max A., Sikeston
Husted, George W., Parma
McClure, Thomas C., Sikeston
Marshall, Alfred H., Charleston
Martin, Andrew D., Sikeston
O'Dell, Timothy T., Oran
Parks, Stephen, 7124 Cedar St., Prairie Village, Kans.
Popp, Carl G., Sikeston
Reeder, Charles C., New Madrid
Rolwing, E. Charles, Charleston
Sample, George A., Chaffee
Sargent, Alden P., Sikeston
Sargent, John P., Sikeston
Sarno, Samuel M., Morehouse
Smith, Audra B., Sikeston
Throgmorton, Howard B., Sikeston
Tribble, Robert E., Chaffee
Urban, Edgar D., Sikeston
Waddle, Theodore L., Dexter
Waltrip, Roy T. Jr., Sikeston
Whittaker, Topsey T. H., East Prairie

### SHANNON COUNTY
**(Carter-Shannon County Medical Society)**

### SHELBY COUNTY
**(Marion-Ralls-Shelby County Medical Society)**

### SOUTH CENTRAL COUNTIES MEDICAL SOCIETY
**(Howell-Oregon-Texas-Wright-Douglas-Ozark Counties)**

Burns, Thomas J., Houston
Callihan, C. F., West Plains
Coffee, Amos L., Willow Springs
Cooper, Claude W., Thayer
Denney, Richard W., Mountain Grove
Dreyer, William F., Houston
Fowler, Marvin L., West Plains
Frame, Homer G., 1216 Cherry St., Springfield
Gentry, Marvin C., Ava
Hogg, Garrett S. Jr., Cabool
Miller, Harold W., Willow Springs
Smith, Rollin H., West Plains
Spears, Joe L., Cabool
Stevens, W. R., 3111 Thompson St., Kansas City 24
Tiffany, D. E., Mountain View
Walker, Ambrose T., Mammouth Springs, Ark.
Wall, Joe A., Houston
Walton, Marion C., Mountain View
Wilbur, David G., Houston
Wiles, Jack N., West Plains
Wilson, John E., West Plains

### STODDARD COUNTY
**(Semo County Medical Society)**

### STONE COUNTY
**(Ozarks Medical Society)**

### SULLIVAN COUNTY
**(North Central Counties Medical Society)**

### TANEY COUNTY
**(Ozarks Medical Society)**

### TEXAS COUNTY
**(South Central Counties Medical Society)**

### VERNON COUNTY
**(West Central Misouri Medical Society)**

### WARREN COUNTY
**(Franklin-Gasconade-Warren County Medical Society)**

### WASHINGTON COUNTY
**(Mineral Area County Medical Society)**

### WAYNE COUNTY
**(Butler-Wayne-Ripley County Medical Society)**

### WEBSTER COUNTY MEDICAL SOCIETY

Bareis, Robert J., Marshfield
Beers, Ellsworth G., Seymour
Macdonnell, Carey R., Marshfield
Macdonnell, Thomas M., Marshfield

### WEST CENTRAL MISSOURI MEDICAL SOCIETY
**(Bates-Cass-Cedar-St. Clair-Vernon-Counties)**

Allen, Claude J., Rich Hill
Allen, William H., Nevada
Barger, O. B., Harrisonville
Barone, Paul L., Nevada
Baska, Richard E., Butler
Beckman, William, Strasburg
Brownsberger, Robert H., Appleton City
Combs, Joe D., Nevada
Davis, C. Braxton, Nevada
Doggett, Sylvester, Sikeston
Eklund, Alfred W., Pleasant Hill
Ellett, William H., Appleton City
Giesler, Donald H., Osceola
Hansen, Arthur L., Butler
Hartwell, Basil O., Drexel
Jones, Edward S., Harrisonville

Kern, Stanley D., Osceola
King, Elbert R., Route 2, Boise, Idaho
LaHue, Lilburn D., Butler
Long, David S., Harrisonville
Love, Walter S., Nevada
Lusk, Charles A. Jr., Butler
Luter, Carter W., Butler
McCann, Louis P., Nevada
Magee, Robert L., El Dorado Springs
Martin, Forrest L., Nevada
Masor, Nathan A., Butler
Moody, Jackson C., Harrisonville
Marrison, George B., Nevada
Pascoe, James J., Nevada
Pearse, Roy W. Jr., Nevada
Pickens, E. Allen, Nevada
Richter, William B., Stockton
Rinck, Edward C., Nevada
Robinson, Edward E., Adrian
Ronald, Douglas C., Butler
Shepherd, Phillip M., El Dorado Springs
Shrout, Cecil B., Bunceton
Todd, Thomas B., Nevada
Tracy, Herbert A., Belton
Tracy, Terry E., Belton
Wray, Rolla B., Nevada

### WORTH COUNTY

**(Nodaway-Holt-Atchison-Gentry-Worth County Medical Society)**

### WRIGHT COUNTY

**(South Central Counties Medical Society)**

# Woman's Auxiliary to the Missouri State Medical Association

## *1962-63 Roster—Members of the Board*

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Burkharth Road, Warrensburg
*Second Vice President*
Mrs. Julius W. Well
Palmyra
*Third Vice President*
Mrs. William B. O'Connor
2316 N. 22nd St., St. Joseph
*Fourth Vice President*
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Fulton
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*Corresponding Secretary*
Mrs. Robert A. Mayer
7509 Wayne Ave., University City 30
*Treasurer*
Mrs. Robert H. Barnes
6714 Kenwood St., Kansas City 31
*Auditor*
Mrs. Guy D. Callaway Jr.
901 E. Portland St., Springfield
*Parliamentarian*
Mrs. Jordan Kelling
Waverly

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422 Sagamore Lane, N. Kansas City 16
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*Fourth District*
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6202 Nottingham Ave., St. Louis 9
*Fifth District*
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Boonville Road, Jefferson City
*Sixth District*
Mrs. Hugh Brady
Concordia
*Seventh District*
Mrs. Solon E. Haynes
5306 Holmes St., Kansas City 13
*Eighth District*
Mrs. Jerry H. Allen
1324 S. Fairway Ter., Springfield
*Ninth District*
Mrs. Claude Cooper
Thayer
*Tenth District*
Mrs. James F. Fairchild
36 S. Moulton St., Perryville

### CHAIRMEN OF STANDING COMMITTEES

*AMA-ERF*
Mrs. T. Reed Maxson
Arilen Acres, Warrensburg
*Archives*
Mrs. Lawrence S. Crispell
911 Kensington Road, Joplin
*Bulletin, National*
Mrs. Wallace R. Stacey
2624 S. Arlington St., Independence
*Bulletin, Quarterly*
Mrs. John W. Deyton
659 Fairview Ave., Webster Groves
*By-Laws*
Mrs. Wilfred E. Martin
403 S. Second St., Odessa
*Circulation Manager*
Mrs. Edmund V. Cowdry Jr.
30 Crestwood Drive, Clayton 5
*Civil Defense*
Mrs. Everett R. Lerwick
40 Portland Place, St. Louis 9
*Community Service*
Mrs. Doyle C. Whitman
6936 Cherokee Lane, Shawnee Mission, Kan.
*Courtesy*
Mrs. Cyril A. Post
960 Cynthia St., Poplar Bluff
*Doctor's Day*
Mrs. J. W. Boger
2803 Skyline Drive, Sedalia
*Finance*
Mrs. A. J. Crider
Dixon
*Health Careers Recruitment*
Mrs. Clement J. Sullivan
6371 Waterman Ave., St. Louis 30
*Co-Chairman*
Mrs. A. P. Stephan
90 West Circle Drive, Jefferson City
*Legislation*
Mrs. Carl R. Ferris
629 W. 70th Ter., Kansas City 13
*Medical Student Loan*
Mrs. Henry C. Bauman
929 W. Third St., Maryville
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Lynn Ave., Fulton
*Mental Health*
Mrs. Jules H. Kopp
7679 Carswold Drive, Clayton 5
*Organization*
Mrs. Harry H. Harkness Jr.
Burkharth Road, Warrensburg
*Press and Publicity*
Mrs. Henry Durst
1 Ivy Lane, Fulton

*Program*
Mrs. Maurice A. Diehr
28 Dromara Road, Ladue 24
*Radio, TV and Films*
Mrs. Charles Willman
2115 Lovers Lane, St. Joseph
*Rural Health*
Mrs. J. L. Washburn
Versailles
*Safety*
Mrs. Alfred E. McDermott
619 Bruce St., Perryville
*Senior Citizens Service*
Mrs. Revis Lewis
1001 W. 56th St., Kansas City 13

## SPECIAL COMMITTEES

*Nominations*
Mrs. Frederick E. Wade
6421 Wornall Ter., Kansas City 13
Mrs. Henry C. Bauman
929 W. Third St., Maryville
Mrs. Maurice W. Chastain
460 E. 56th Ter., N. Kansas City 18
Mrs. Edmund V. Cowdry Jr.
30 Crestwood Drive, Clayton 5
Mrs. James A. Reid
102 E. Rea St., Marshall
*Point System*
Mrs. Ludwig O. Muench
1530 Riverview Drive, Washington
Mrs. John E. Lamy
509 W. Broadway, Sedalia
Mrs. Fred L. Nelson
624 N. 25th, St. Joseph
*Reading*
Mrs. Lawrence S. Crispell
911 Kensington Road, Joplin
Mrs. Harry H. Harkness Jr.
Burkharth Road, Warrensburg
Mrs. Robert H. Stewart
Driftwood Drive, Sedalia

## PAST STATE PRESIDENTS

| | |
|---|---|
| Mrs. George H. Hoxie* (Jackson) | 1924-25 |
| Mrs. M. P. Overholzer* (West Central) | 1925-26 |
| Mrs. Arthur B. McGlothlan (Buchanan)<br>821 N. 24th St., St. Joseph | 1926-27 |
| Mrs. W. M. Bickford* (Saline) | 1927-28 |
| Mrs. Willard W. Bartlett Sr. (St. Louis City)<br>53 Westmoreland Place, St. Louis 8 | 1928-29 |
| Mrs. M. P. Ravanal* (Boone) | 1929-30 |
| Mrs. A. W. McAlester* (Jackson) | 1930-31 |
| Mrs. U. J. Busiek (Greene)<br>1635 E. Walnut St., Springfield | 1931-32 |
| Mrs. David S. Long (West Central)<br>M 40, Lake Lotowanna, Lee's Summit | 1932-33 |
| Mrs. Hudson Talbot (St. Louis City)<br>405 Winton Lane, Louisville. Ky. | 1933-34 |
| Mrs. W. H. Goodson* (Clay) | 1934-35 |
| Mrs. M. Pinson Neal (Boone) | 1935-36 |
| Mrs. Walter C. Kirchner (St. Louis City) | 1936-37 |
| Mrs. Charles H. Werner* (Buchanan) | 1937-38 |
| Mrs. Herbert L. Mantz (Jackson)<br>1209 Romany Road, Kansas City 13 | 1938-39 |
| Mrs. Paul E. Cole (Greene)<br>1819 Main St., Quincy, Ill. | 1939-40 |
| Mrs. S. P. Howard (Cole)<br>3505 Greenwood Drive, Waco, Tex. | 1940-41 |
| Mrs. J. J. Drace (Cape Girardeau)<br>Claran Apartments, Cape Girardeau | 1941-42 |
| Mrs. Frank L. Davis* (St. Louis City) | 1942-43 |
| Mrs. Robert C. Haynes (Saline)<br>754 Eastwood, Marshall | 1943-44 |
| Mrs. J. B. McCubbin (Callaway)<br>531 E. 20th St., New York 10, N. Y. | 1944-45 |
| Mrs. Harry M. Gilkey* (Jackson) | 1945-46 |
| Mrs. W. E. Koppenbrink Sr. (Lafayette-Ray)<br>Higginsville | 1946-47 |
| Mrs. W. L. Allee* (Miller-Moniteau-Morgan) | 1947-48 |
| Mrs. August A. Werner* (St. Louis City) | 1948-49 |
| Mrs. John J. O'Connell (St. Louis County)<br>1937 O'Connell Ave., Overland 14 | 1949-50 |
| Mrs. Dwight T. Van Del (Jackson)<br>6767 Rockhill Road, Kansas City 10 | 1950-51 |
| Mrs. W. Carey Cheek (Greene)<br>1535 E. Meadowmere, Springfield | 1951-52 |
| Mrs. Richard A. Sutter (St. Louis County)<br>7215 Greenway Dr., University City 30 | 1952-53 |
| Mrs. C. Alex McBurney (Saline)<br>927 Hurt St., Slater | 1953-54 |
| Mrs. Wilfred E. Martin (Lafayette-Ray)<br>403 S. Second St., Odessa | 1954-55 |
| Mrs. Frank B. Leitz (Jackson)<br>6832 Locust St., Kansas City 10 | 1955-56 |
| Mrs. Charles T. Shepherd (St. Louis County)<br>10 Covington Meadows, St. Louis 32 | 1956-57 |
| Mrs. Armand D. Fries (St. Louis City)<br>11 West Geyer Lane, St. Louis 31 | 1957-58 |
| Mrs. Henry C. Bauman (Nodaway-Atchison-Gentry-Worth-Holt)<br>929 W. Third St., Maryville | 1958-59 |
| Mrs. Stanley S. Peterson (Greene)<br>721 E. Stanford St., Springfield | 1959-60 |
| Mrs. Jordan Kelling (Lafayette-Ray)<br>Waverly | 1960-61 |
| Mrs. Frederick E. Wade (Jackson)<br>6421 Wornall Ter., Kansas City 13 | 1961-62 |

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* Deceased.

## MSMA ADVISORY COUNCIL

Maurice A. Diehr, M.D.
9385 Page Blvd., St. Louis 14
Donald M. Dowell, M.D.
Chillicothe
Durward G. Hall, M.D.
Route 12, Box 980, Springfield
Arthur W. Neilson, M.D.
539 N. Grand Blvd., St. Louis 3
Frederick E. Wade, M.D.
Professional Bldg., Kansas City 6

## AUXILIARIES AND COUNTY MEDICAL SOCIETIES LISTED BY DISTRICTS

FIRST DISTRICT: Andrew,* Buchanan, Clay, Clinton,* Grand River (Caldwell, Carroll, Daviess, DeKalb, Grundy, Harrison, Linn, Livingston, Mercer), Nodaway-Atchison-Gentry-Worth-Holt, Platte.*

SECOND DISTRICT: Chariton-Macon-Monroe-Randolph,* Clark-Lewis-Scotland,* Marion-Ralls-Shelby, North Central (Adair, Knox, Putnam, Schuyler, Sullivan*).

THIRD DISTRICT: St. Louis City.

FOURTH DISTRICT: Franklin-Gasconade-Warren,* Jefferson, Lincoln-St. Charles,* St. Louis County.

FIFTH DISTRICT: Audrain, Boone, Callaway, Camden,** Cole, Cooper, Howard,* Miller-Moniteau-Morgan, Montgomery.*

SIXTH DISTRICT: Benton,* Henry,* Johnson, Lafayette-Ray, Pettis, Saline, West Central (Bates, Cass, Cedar, St. Clair, Vernon).

SEVENTH DISTRICT: Jackson.

EIGHTH DISTRICT: Barton-Dade,* Dallas-Hickory-Polk,* Greene, Jasper, Ozarks (Barry, Christian, Lawrence, McDonald, Newton, Stone, Taney), Webster.*

NINTH DISTRICT: Carter-Shannon,* Mid-Missouri (Crawford, Dent, Laclede, Maries, Phelps, Pulaski*), South Central (Douglas, Howell, Oregon, Ozark, Texas, Wright).

TENTH DISTRICT: Bollinger,** Butler-Ripley-Wayne, Cape Girardeau, Dunklin, Mineral Area (Iron, Madison, Reynolds, St. Francois, Ste. Genevieve, Washington), Pemiscot,* Perry, SEMO (Mississippi, New Madrid, Scott, Stoddard*).

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* Denotes no organized Auxiliary.
** Denotes no Medical Society.

## ORGANIZED COUNTIES AND THEIR PRESIDENTS LISTED ALPHABETICALLY

*Audrain*
Mrs. Thomas L. Dwyer
119 E. Love St., Mexico

*Boone*
Mrs. David G. Hall
209 Fredora St., Columbia

*Buchanan*
Mrs. Fred L. Nelson
624 N. 25th St., St. Joseph

*Butler-Ripley-Wayne*
Mrs. Cyril A. Post
960 Cynthia St., Poplar Bluff

*Callaway*
Mrs. James K. Ritterbusch
Fulton

*Clay*
Mrs. Truman B. Schertz
416 Sagamore Lane, N. Kansas City 16

*Cole*
Mrs. Harold H. Kanagawa
734 Houchin St., Jefferson City

*Cooper*
Mrs. Edward T. Humphreys
1123 Third St., Boonville

*Dunklin*
Mrs. Dorwyn W. Croom
403 Stokes Blvd., Malden

*Grand River*
Mrs. George Gary
112 W. Hauser St., Marceline

*Greene*
Mrs. Glenn O. Turner
1462 S. Dollison St., Springfield

*Jackson*
Mrs. Louis H. Forman
2801 W. 67th St., Shawnee Mission, Kansas

*Jasper*
Mrs. Clyde C. Young
2518 E. 13th St., Joplin

*Jefferson*
Mrs. J. Logan Mayfield
17 Tree Brook Drive, Crystal City

*Johnson*
Mrs. R. Lee Cooper
411 W. Gay, Warrensburg

*Lafayette-Ray*
Mrs. Charles T. Riley
Richmond

*Marion-Ralls-Shelby*
Mrs. Harry L. Greene
1911 Harrison Hill, Hannibal

*Miller-Moniteau-Morgan*
Mrs. Richard Fulks
706 N. Oak St., California

*Mineral Area*
Mrs. Charles W. Chastain
30 Tanglewood St., Farmington

*Nodaway-Atchison-Gentry-Worth-Holt*
Mrs. Henry C. Bauman
929 W. Third St., Maryville

*Ozarks*
Mrs. Lewis Yates
State Sanatorium, Mount Vernon

*Perry*
Mrs. Theodore Fischer
Altenburg

*Pettis*
Mrs. Robert H. Stewart
Driftwood Drive, Sedalia

*St. Louis City*
Mrs. Delavan Calkins
1515 Schulte Road, St. Louis 41

*St. Louis County*
Mrs. Paul W. Miles
15 Ridge Creek, St. Louis 41

*Saline*
Mrs. Robert Blalock
1380 South Salt Pond, Marshall

*South Central*
Mrs. Marion C. Walton
Mountain View

*West Central*
Mrs. Basil O. Hartwell
Drexel

# List of Woman's Auxiliary by County Society

### AUDRAIN COUNTY
**(Mexico)**

Davis, Mrs. Leonard, 725 Lakeview St.
Dwyer, Mrs. Thomas, 301 N. Cole St.
Epple, Mrs. Lawrence, 5026 Monroe St.
Gantt, Mrs. Ernest S., Teal Lake Road
Garcia, Mrs. C. L., 1415 S. Clark St.
Jolley, Mrs. J. I., 726 W. Monroe St.
Kittelberger, Mrs. Hazel, 1101 West St.
Lankford, Mrs. Harold, 1025 S. Olive St.
O'Brien, Mrs. Harry, 408 Harvard St.
Rodes, Mrs. Ned D., 625 Lakeview St.
Rouse, Mrs. David M., 1415 Hickory Hill
Shaw, Mrs. Gordon, 1717 Reavis Road
Wallace, Mrs. Ed, 811 S. Jefferson St.

### BOONE COUNTY
**(Columbia)**

Allen, Mrs. Horace E., 2109 Valley View Drive
Allen, Mrs. Joseph E., Route 5
Allen, Mrs. William C., 2401 Highland Drive
Anast, Mrs. Constantine, 700 Thilly St.
Asel, Mrs. Norman D., 1112 S. Glenwood St.
Baker, Mrs. James A., RFD 4
Basket, Mrs. Edgar D., 1316 Bass Ave.
Black, Mrs. Samuel P. W., 300 S. Glenwood St.
Bradford, Mrs. O. F., Frederick Apartments
Brooke, Mrs. Clement E., 901 Edgewood St.
Bruner, Mrs. Claude R., 511 S. Glenwood St.
Buessler, Mrs. John A., 813 Maupin Road
Bumgarner, Mrs. Roger W., Route 1
Burns, Mrs. Thomas W., 1009 S. Providence Road
Chalkley, Mrs. Judson I., 614 W. Stewart Road
Cochran, Mrs. Donald Q., 112 Sappington St.
Cooper, Mrs. Maurice E., 1000 Wayne Road
Cope, Mrs. James C., 609 Crestland Ave.
Darnell, Mrs. Thomas F. B., 102 Westridge Drive
Davis, Mrs. David, 801 Crestland St.
Denninghoff, Mrs. James C., 1108 Jean Rae Drive
Eggers, Mrs. William, 100 Westmount St.
Evans, Mrs. Alden M., 807 Maupin Road
Flynn, Mrs. Joseph E., 1121 S. Glenwood St.
Fuchs, Mrs. George J., Jr., 1026 Hickory Hill Drive
Galeota, Mrs. William R., 1719 Ridgmont St.
Garrett, Mrs. Glen H., 102 E. Brandon Road
Gaunt, Mrs. William D., 1125 St. Christopher St.
Hall, Mrs. David G., 209 Fredora St.
Hall, Mrs. John, Walter Apartments
Hanlon, Mrs. Russel, 1606 Highridge Circle
Jackson, Mrs. Robert L., 1103 Stewart Road
Johnson, Mrs. Richard E., 109 Circle Ridge Drive
Keown, Mrs. Kenneth K., 402 Westmount
Kubin, Mrs. Milford T., Route 4
LaChance, Mrs. Leopold, Centralia
Ladenson, Mrs. Roland P., 704 Westmount St.
Lamke, Mrs. Charles M., Route 6
Leech, Mrs. Charles M., 815 W. Stewart Road
Logue, Mrs. John T., 700 Crestland Ave.
Lowney, Mrs. John F., 15 Clinton Drive
Lucas, Mrs. Fred V., 2 Ridgeley Road
McElroy, Mrs. Glenn, RFD 3
Marienfeld, Mrs. Carl, 304 Longfellow Lane
Martt, Mrs. Jack M., 1200 Sunset Drive
Mayer, Mrs. William, 1000 Lakeshore Drive
Miller, Mrs. LeRoy J., 32 Bingham Road
Modlin, Mrs. John J., 706 Thilly Ave.
Overholser, Mrs. Milton D., 110 E. Brandon Road
Payne, Mrs. John W., 805 W. Broadway
Pickard, Mrs. Clarence M., 303 Spring Valley Road
Pingleton, Mrs. William B., 113 Tracy Drive
Ray, Mrs. C. Thorpe, 822 Greenwood Court
Roden, Mrs. Jacob S., 702 Marion Drive
Rodgers, Mrs. Elrie P., 102 S. Glenwood St.
Sala, Mrs. Jose M., 908 Edgewood St.
Scheuber, Mrs. Charles, 505 W. Blvd., South
Schewe, Mrs. Elmer J., 1232 Sunset Hill
Sights, Mrs. W. P. Jr., 309 Tracy Drive
Simpson, Mrs. Lloyd, 503 W. Stewart Road
Smith, Mrs. J. Ned, Jr., 701 West Blvd. South
Smith, Mrs. Joe R., 307 Maplewood Drive
Smith, Mrs. S. D., 1404 E. Broadway
Spurgeon, Mrs. Milo J., 404 Edgewood St.
Stewart, Mrs. William J., Route 5
Stoeckle, Mrs. Harry, 2226 Shepard Blvd.
Tapia, Mrs. Fernando, 104 Sappington St.
Thomas, Mrs. Horace E., 503 Russell Blvd.
Thompson, Mrs. Ian M., 504 Edgewood St.
Waggoner, Mrs. Charles M., 712 Hilltop Drive
Walters, Mrs. John H., 1027 Hickory Hill Drive
Washington, Mrs. Edward L., 204 Stewart Road
Weiss, Mrs. James M. A., 101 S. Glenwood St.
Wilson, Mrs. Vernon E., Route 4

### BUCHANAN COUNTY
**(St. Joseph)**

Allain, Mrs. James J., 3406 Neighbor Road
Ames, Mrs. William H., 2318 Lovers Lane
Baker, Mrs. W. C., Savannah
Bascom, Mrs. Charles H., 2505 Edmond St.
Beck, Mrs. Paul M., 3216 Coronado Road
Benson, Mrs. Scott C., 1404 N. 26th St.
Berney, Mrs. Francis J., 1225 N. 10th St.
Bristow, Mrs. Robert B., 1610 Ashland St.
Butler, Mrs. E. F., 3804 Seneca St.
Byrne, Mrs. J. I., 1915 Lovers Lane
Carle, Mrs. H. W., Jr., 2707 N. 26th St.
Carpenter, Mrs. G. T., 2612 Indian Trail
Chiarottino, Mrs. Joseph F., 11 Lindenwood Lane
Christ, Mrs. Martin H., 1015 Garden St.
Craig, Mrs. Owen W. D., 1625 Crescent Drive
Day, Mrs. Maxwell, 2111 Lovers Lane
DuMont, Mrs. Clement, 1905 Francis St.
Durham, Mrs. S. L., Dearborn
Fisher, Mrs. Joseph L., 2903 Ashland St.
Forgrave, Mrs. John R., 1908 Clay St.
Forgrave, Mrs. Leon P., Hundley Drive
Forman, Mrs. George W., 2412 Ashland St.
Grant, Mrs. Claude S., 7 Lindenwood Lane
Gray, Mrs. W. W., 3102 S. 22nd St.
Grimes, Mrs. M. E., 815 N. Noyes St.
Handler, Mrs. Eric, 1070 Crestview Lane
Harner, Mrs. C. G., 1080 Crestview Lane
Hartigan, Mrs. F. X., 1801 Ashland St.
Hayes, Mrs. Paul W., 610 N. Noyes St.
Herman, Mrs. Allen J., 1909 N. 32nd St.
Howden, Mrs. Thomas L., 2723 Francis St.
Hughes, Mrs. Judson M., 2212 Eugene Field St.
Hunt, Mrs. William J., 2600 Pacific St.
Ide, Mrs. Lucien W., 1416 N. 25th St.
Kieber, Mrs. R. W., 1915 N. 33rd St.
Kline, Mrs. Edmond W., Crestview Village
Knepper, Mrs. Paul, 2002 Ashland St.
Kulowski, Mrs. Jacob, 2515 Francis St.
Lee, Mrs. Carleton H., 2716 Douglas St.
Luckinbill, Mrs. Paul, Plattsburg
McDaniel, Mrs. John R., 1808 N. 29th St.
McDonald, Mrs. Wilbur P., 6 Country Club Lane
McGlothlan, Mrs. A. B., 821 N. 24th St.
Mabrey, Mrs. John P., Plattsburg
Maginn, Mrs. R. L., 1813 Lovers Lane Heights
Martin, Mrs. John, 9 Lindenwood Lane
Meluney, Mrs. S. E., 1810 N. 30th St.
Miller, Mrs. E. A., 2627 Frederick Ave.
Minton, Mrs. W. H., 2221 Eugene Field St.
Moen, Mrs. Berwyn H., 2823 Monterey St.
Morse, Mrs. Marvin W., 2702 Faraon St.
Mothershead, Mrs. John L., 2630 Fairleigh Ter.
Nelson, Mrs. Fred L., 624 N. 25th St.
Ness, Mrs. Carl K., 8 Lindenwood Lane
O'Connor, Mrs. James, 401 N. 22nd St.
O'Connor, Mrs. Wm. B., 2316 N. 22nd St.
Petersen, Mrs. Harold E., 2902 Frederick St.
Pettit, Mrs. Manson B., 3315 Frederick St.
Pfeffer, Mrs. Robert, 1915 N. 29th St.
Potter, Miss Bertha, 1112 Dewey St.
Potter, Mrs. Caryl Jr., 2232 Eugene Field St.
Potter, Mrs. Thompson E., 2604 Pacific St.
Redmond, Mrs. William, 3102 Jule St.
Riddell, Mrs. Richard V., 2610 Indian Trail
Rogers, Mrs. John T., 2502 Ashland St.
Rosenthal, Mrs. Irwin, 2715 Union St.
Rost, Mrs. William B., 2221 Northwest Extension
Roundy, Mrs. Collis I., RFD 2
Saferstein, Mrs. T. H., 2903 Sherman St.
Senne, Mrs. Herbert C., 1308 S. Noyes St.
Shevlin, Mrs. Charles F., 804 N. 25th St.
Smith, Mrs. Clifton, 2821 Ashland St.
Stallard, Mrs. Donald J., 1417 N. 25th St.
Tahir, Mrs. Mohammad, 1415 N. 24th St.
Thomas, Mrs. Forrest, 1301 N. 25th St.
Thompson, Mrs. F. Gregg III, 2714 Ashland St.
Thompson, Mrs. F. Gregg Jr., 631 Hall St.
Wadlow, Mrs. Ernest E., 2611 Lovers Lane
Waggoner, Mrs. Sharon E., 5820 S. 3rd St.
Warres, Mrs. Herbert, 2221 Carper Drive
Weed, Mrs. Randall W., 1821 Clay St.
Whitsell, Mrs. Ora Earl, 2306 Sacramento St.
Willman, Mrs. Charles, 2115 Lovers Lane
Willumsen, Mrs. Henry C., 2209 Eugene Field St.

### BUTLER COUNTY
**(Poplar Bluff)**

Barbour, Mrs. Marvin R., 1721 N. Main St.
Beecher, Mrs. S. B., 1517 Rosedale Lane
Biggs, Mrs. Fred J., Jr., 808 N. Main St.
Brookerson, Mrs. A. F., 321 Oak St.
Burcham, Mrs. Tom R. Jr., 119 State St., Doniphan
Caldwell, Mrs. Fred, 1404 Meadowbrook St.
Dinelli, Mrs. Frank E., 427 N. Main St.
Engelhardt, Mrs. Robert C., 1513 Rosedale St.
Gernstetter, Mrs. S. L., 709 Kinzer St.
Hansbrough, Mrs. Eugene T., 1111 Fairmount St.
Henrickson, Mrs. H. M., Hiway 67 North
Johnson, Mrs. Frank, Doniphan
Kneibert, Mrs. Fred L., 1301 Barron Road
McLain, Mrs. B. M., 724 Cynthia St.
Macauley, Mrs. B. J., 217 Oak St.
Mann, Mrs. James K., 2202 Trousdale St.
Markel, Mrs. Arthur D., Jackson Road
May, Mrs. A. L. Jr., 455 No. 11th St.
Miller, Mrs. David V., Hiway 67 South
Moore, Mrs. Daniel B., 1408 Meadowbrook St.
Parker, Mrs. Arthur C. Jr., 708 Selma St.
Post, Mrs. Cyril A., 960 Cynthia St.
Ripley, Mrs. C. E., 2016 Barron Road
Robertson, Mrs. Wm. D., 1410 Woodland St.
Ruff, Mrs. T. Eugene, 1411 Rosedale St.
Turner, Mrs. James H., 1301 Gray St.
Turner, Mrs. Wm. F., 1308 Nooney St.
Wright, Mrs. John L., 621 Old St.

### CALLAWAY
**(Fulton)**

Baur, Mrs. Alfred K., RFD 1
Brown, Mrs. John J., 1304 N. Vine St.
Cremer, Mrs. Wm. J., State Hospital

Durst, Mrs. Henry, 1 Ivy Lane
Freund, Mrs. Harold G., State Hospital
Groce, Mrs. George D., 1 Bartley Lane
Hill, Mrs. James E., Washington
Jackson, Mrs. Vernon B., 407 Court St.
Kepler, Mrs. Earl G., Reed Add'n.
Ritterbusch, Mrs. James K., State Hospital
Robertson, Mrs. Robert C., State Hospital
Sydow, Mrs. Henry, 1201 Grand St.
Tellez, Mrs. E. R., Lynn Ave.
Wood, Mrs. George F., 2 Plaza Drive

### CAPE GIRARDEAU COUNTY
(Cape Girardeau)

Ashley, Mrs. Hugh V. Jr., 1201 Perry St.
Bahn, Mrs. Charles F., 2509 Fair Lane
Barnes, Mrs. Seth S., Bloomfield Road
Blankenship, Mrs. Dale F., 907 W. Cape Rock Drive
Campbell, Mrs. Edward D., 1100 N. Henderson St.
Chapman, Mrs. Jean Allen, 1200 Sailer Circle
Cochran, Mrs. Jo Robert, 2452 Brookwood St.
Cook, Mrs. Norman L., 1611 Lacey St.
Crowe, Mrs. John T., 1000 N. Henderson St.
Elrod, Mrs. Dennis B., Karau Lane
Estes, Mrs. Albert M., Hiway 61
Hall, Mrs. Frank W., Sylvan Lane
Hector, Mrs. Joe, Hiway 70 W (Jackson County)
Herbert, Mrs. Charles T., Sylvan Lane
Hoxworth, Mrs. Gerald, Oxford Drive
Jaeger, Mrs. Joseph W., Shady Lane (Jackson County)
Johnson, Mrs. Earl Wayne, 1044 N. Henderson St.
Jung, Mrs. Marshall, Illmo-Scott City, Mo.
Kasten, Mrs. Melvin C., 1453 Themis St.
Keim, Mrs. J. Harry, 643 N. West End Blvd.
Kinder, Mrs. James A., 348 N. Park St.
Kratz, Mrs. Paul E., 1720 Cecilia St.
Lovinggood, Mrs. Thomas A., Sylvan Lane
McDonald, Mrs. Eugene F., 225 W. Main St.
McGinty, Mrs. Charles P., 372 N. Park St.
Magaletta, Mrs. George, 1501 Whitener St.
Nunnelly, Mrs. Gordon, 1432 Themis St.
Nussbaum, Mrs. Paul B., 209 Sunset Blvd.
Oehler, Mrs. Wm. F., 1617 Themis St.
Otto, Mrs. Thomas G., 511 Alta Vista St.
Rapp, Mrs. Harold B., 1011 N. Henderson St.
Rawlings, Mrs. Fred E., 1651 Bertling St.
Reynolds, Mrs. Garland A., 537 Alta Vista St.
Ridings, Mrs. Harold D., 96 E. Cape Rock Drive
Ritter, Mrs. Raymond A., 1257 Rockwood St.
Seabaugh, Mrs. D. I. L., 922 West Main St.
Seabaugh, Mrs. Loy R., 334 N. Ellis St.
Seabaugh, Mrs. O. L., RFD 2, Box 563
Shoss, Mrs. Milton, West Cape Rock Drive
Tribble, Mrs. Robert, Chaffee, Mo.
Tygett, Mrs. Glenn J., 834 Alta Vista St.
Weeks, Mrs. George Robert, 1728 Bessie St.
Wilson, Mrs. Charles F., Oak Lei Drive
Wolff, Mrs. Paul G., 90 E. Cape Rock Drive

### CLAY COUNTY
(Kansas City)

Adams, Mrs. Howard, 114 N. Water, Liberty
Allen, Mrs. S. Lloyd, Route 6, Box 404 B, Parkville
Bates, Mrs. G. Comer, 11 E. Briarcliff Road
Boone, Mrs. Daniel, 3329 Mohawk Lane
Bowles, Mrs. Richard, 1950 Kings Highway, Liberty
Chastain, Mrs. Maurice W., 460 E. 56 Ter. North
Chiles, Mrs. David R., Smithville
Cox, Mrs. William L., 1469 Spruce, Liberty
Dunham, Mrs. R. H., Route 1, Liberty
Dwyer, Mrs. R. D., 1000 S. Woodland Dr.
Edwards, Mrs. Theodore F., 2205 E. 39th St. North
Fischer, Mrs. Edward H., 4000 Indianola Drive
Fowler, Mrs. I. Charles, 700 E. Barnes St.
Gauer, Mrs. Robert, 4916 N. Sherwood Drive
Hayes, Mrs. Lawrence L., 1508 E. 51st St. North
Hendren, Mrs. Glen W., 516 West Franklin, Liberty
Hobbs, Mrs. Earl B., Smithville
Hodge, Mrs. Robert H., 2204 E. 39th St. North
Knox, Mrs. Earl R., 115 E. 43rd St. North
Kratz, Mrs. Frederick, 3653 Briarcliff Road
Kuenzi, Mrs. Donald E., 924 South Woodland Drive
Langhus, Mrs. Melvin O., 104 W. Englewood Road
Lewis, Mrs. Albert, Smithville
McCormick, Mrs. James E., 309 Northcrest Drive
McCracken, Mrs. S. R., 810 Old Orchard, Excelsior Springs
Mullins, Mrs. B. L., Route 20, Smithville
Musgrave, Mrs. David E., 420 North Kimball, Excelsior Springs
Parker, Mrs. Robert Harvey, 112 E. 43rd St., North
Petersen, Mrs. E. G., 6711 North Wayne St.
Pileggi, Mrs. Felix A., 307 W. 55th Ter. North
Revare, Mrs. Paul, 3245 Chippewa Drive
Roberts, Mrs. L. Marvin, 3906 E. 50th St. North
Schertz, Mrs. Truman B., 416 Sagamore Lane
Spelman, Mrs. Arch E., Bridge St., Smithville
Sportsman, Mrs. Weldon L., 6309 N. Grand St.
Werner, Mrs. Dean F., 4609 N. Main St.
Werner, Mrs. Franklin C., 422 Sagamore Lane
Williams, Mrs. John W., 616 Ridgeway Drive, Liberty
Willoughby, Mrs. James W., 420 North Ridge, Liberty
Withrow, Mrs. John B., 3925 N. Main St.

### COLE COUNTY
(Jefferson City)

Adams, Mrs. Charles F., 26 Hobbs Lane
Belinson, Mrs. Louis, 2008 Redwood Drive
Bowe, Mrs. Edwin, 401 Ridgeway St.
Cox, Mrs. William A., 206 Swift's Highway
Dorris, Mrs. Richard P., 1104 Vineyard Square
Doyle, Mrs. Matthew, 1528 Mimosa St.
Duval, Mrs. Addison, 1606c Jefferson Heights
Enloe, Mrs. L. David, 1200 Moreland St.
Exon, Mrs. C. Stuart, Boonville Road
Garner, Mrs. Lynn M., 403 Meier Drive
Gordon, Mrs. James, Boonville Road
Gove, Mrs. Herman S., 712 Broadway
Guhleman, Mrs. Henry V. Jr., Box 122, Greenberry Road
Gurnee, Mrs. Landon H., 121 Westmore Drive
Handler, Mrs. Fred P., 95 E. Circle Drive
Kanagawa, Hrs. Harold Hajime, 734 Houchin St.
Kelly, Mrs. Marshall W., 1610 Greenberry Road
Leslie, Mrs. James P., 933 Fairmount St.
Leslie, Mrs. James T. Jr., 1427 Major Drive
Loyd, Mrs. Earl L., 114 Binder Drive
McHaney, Mrs. John W., Highway 50 West
McKnelly, Mrs. William V., 1213 Elmerine St.
Matthews, Mrs. John I., 1310 Moreau Drive
Meier, Mrs. Francis X., 1913 Hayselton Drive
Meinershagen, Mrs. Charles W., 138 Forest Hill
Ossman, Mrs. Julian A., 2505 W. Main St.
Russell, Mrs. Joseph P., 1517 Greenberry Road
Sanders, Mrs. Jack Shelby, 2008 Livingston St.
Sennott, Mrs. John Stephen, 102 Douglas St.
Shull, Mrs. G. Donald, 1925 Hayselton Drive
Stauffer, Mrs. Harry Beach, 1906 Chicago Road
Stephan, Mrs. August P., 90 W. Circle Drive
Stewart, Mrs. James, 201 Clay St.
Stricker, Mrs. Harold C., 1205 Moreau Drive
Sugarbaker, Mrs. Everett D., 2113 W. Main St.
Summers, Mrs. Joseph S. Jr., 2313 W. Main St.
Tanner, Mrs. Robert H., 1606 Greenberry Road
Taylor, Mrs. Leon A., 1104 W. Main St.
Tietjen, Mrs. Fred O., Kraus Addition, Route 3
Watts, Mrs. Byron E., 2112 Forest Drive
Winegar, Mrs. Alvon C., Highway 50 West

### COOPER COUNTY
(Boonville)

Abele, Mrs. William Arved, 711 E. Morgan St.
Avery, Mrs. Willard Bartlett, 20 Crestview St.
Beckett, Mrs. Theodore Cooper, 725 Fourth St.
Diekroeger, Mrs. Manuel Louis, Maplewood Farm, Route 1
Friedrichs, Mrs. Vernon David, Pilot Grove
Hata, Mrs. Daikichi, 7 Morningside Drive
Humphreys, Mrs. Edward Tristran, 1123 Third St.
Nolen, Mrs. Jack, 1404 Jefferson Drive
Stuart, Mrs. Byron McClellan, 910 Shamrock Ter.
Winn, Mrs. George Warren, 415 Fourth St.

### DUNKLIN COUNTY

Baldwin, Mrs. Paul, 200 W. Washington St., Kennett
Benson, Mrs. Leo J. Jr., 204 Wiggs St., Kennett
Cash, Mrs. Charles R., 317 N. Jackson St., Kennett
Cofer, Mrs. J. C., 404 N. Walnut St., Kennett
Croom, Mrs. D. W., 411 West Park St., Malden
Dunmire, Mrs. George Q., 504 S. Baker Drive, Kennett
English, Mrs. Wallace D., Box 67, Cardwell
Milligan, Mrs. M. C., Campbell
Miltenberger, Mrs. Paul C., 705 W. Washington St., Kennett
Morehead, Mrs. William Edward, 301 N. Everett St., Kennett
Palenske, Mrs. R. L., Box 57, Hornersville
Presnell, Mrs. U. A. V., 915 S. Jackson St., Kennett
Spence, Mrs. E. L., 301 College St., Kennett
Tarver, Mrs. Quinton, 1003 W. Washington St., Kennett
Wilson, Mrs. Loys C., 915 S. Jackson St., Kennett
Zimmerman, Mrs. Joe A., 906 W. Washington St., Kennett

### GRAND RIVER COUNTIES
(Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb Counties)

Allen, Mrs. Erroll Warren, 110 N. Rea St., Carrollton
Bales, Mrs. Eugene, 502 W. 3rd. Ter., Carrollton
Bohnsack, Mrs. Ralph, 1017 Brookfield Ave., Brookfield
Carter, Mrs. Howard, 506 N. Davis St., Carrollton
Clark, Mrs. Chester L., 13 Town & Country, Trenton
Conrad, Mrs. Joseph, 1202 Jackson St., Chillicothe
Cullers, Mrs. Charles H., 205 W. 12th St., Trenton
Daley, Mrs. Frank, 508 E. Samuel St., Hamilton
Dixon, Mrs. John R., 1005 Brookfield Ave., Brookfield
Dowell, Mrs. J. Larry, Pattonsburg
Dowell, Mrs. Donald M., 1830 Calhoun St., Chillicothe
Duffy, Mrs. Oliver R., RFD 1, Trenton
Ellsworth, Mrs. Willard, Cainsville

Fair, Mrs. William Leonard, 1705 Calhoun St., Chillicothe
Fuson, Mrs. William, 520 Pleasant View, Trenton
Gale, Mrs. Joseph, 1710 Polk St., Chillicothe
Gary, Mrs. George, 112 W. Hauser St., Marceline
Horner, Mrs. Glennon, W. Walker St., Marceline
Howell, Mrs. Billy Dale, 416 Shelby St., Brookfield
Magil, Mrs. Joseph S., 523 Baker Ave., Milan
Mairs, Mrs. Catherine, 412 E. 7th St., Trenton
Mandler, Mrs. George, 1616 Clay St., Chillicothe
Nibbe, Mrs. Albert F., Box 33, Bethany
Platz, Mrs. John H., 804 N. Main St., Carrollton
Smith, Mrs. Robert Windle, 509 E. Houser St., Marceline
Sweiger, Mrs. James H., Maysville
Vandiver, Mrs. Virgil Dale, 1836 Polk St., Chillicothe
Vinyard, Mrs. Jack L., RFD 2, Carrollton

### GREENE COUNTY
### (Springfield)

Allen, Mrs. Jerry H., 1324 S. Fairway Ter.
Anthony, Mrs. Dallas D., 1322 South Pickwick St.
Ash, Mrs. Charles J., 2300 South Maryland St.
Ashley, Mrs. Thomas E., Route 12, Box 1057
Atkinson, Mrs. Thomas E. Jr., Route 3, Box 1036 C
Auner, Mrs. Cecil, 649 McCann St.
Baldwin, Mrs. Richard, 2103 S. Kings St.
Bonebrake, Mrs. MacDonald D., 1443 S. Delaware St.
Bareis, Mrs. Robert, 408 N. Locust St., Marshfield
Brown, Mrs. Alex L., 2424 Sheridan Blvd.
Brown, Mrs. Lyman D., 1212 N. Sherman St.
Burkey, Mrs. Jordan W., 2405 Sheridan Blvd.
Busiek, Mrs. Paul, Route 9, Box 598
Busiek, Mrs. Urban, 1635 E. Walnut St.
Callaway, Guy D., 1155 S. Delaware St.
Callaway, Mrs. Guy D. Jr., 901 E. Portland St.
Cheek, Mrs. W. Carey, 1534 E. Meadowmere St.
Christy, Mrs. Raymond A., 2868 Eastmoor St.
Clarke, Mrs. Michael J., 2416 Brentwood Blvd.
Clary, Mrs. William F., 2259 Mirabeau St.
Clayton, Mrs. Edgar L., 2446 Brentwood Blvd.
Cochran, Mrs. Thomas E. Jr., 2423 Brentwood Blvd.
Coller, Mrs. Frederick C., 2433 Marlan St.
Conrad, Mrs. Raymond C., 1338 S. Delaware St.
Crawford, Mrs. Oral B., 1445 Wayland Drive
Cunningham, Mrs. Darral D., 1425 S. Delaware St.
Delzell, Mrs. William A., Route 1, Willard
Dietz, Mrs. Mortimer Wendell, 2540 Edgewater St.
Dillard, Mrs. Erin M., 2530 Marlan St.
Duncan, Mrs. Robert D., 1234 E. Loren St.
Elkins, Mrs. Ronald F., 2830 E. Glenwood St.
Ellis, Mrs. Francis J., 2235 E. Glenwood St.
Evans, Mrs. Ezra L. Jr., 1260 E. Catalpa St.
Farthing, Mrs. Fred R., 1234 E. Walnut St.
Farthing, Mrs. Gene W., 1235 E. Walnut St.
Ferguson, Mrs. John P., 1219 S. Clay St.
Ferguson, Mrs. John P. Sr., 1045 E. Linwood Drive
Ferrell, Mrs. Thomas E. Jr., 1525 E. Meadowmere St.
Fessenden, Mrs. Ersel M., 634 Kingsbury St.
Fitch, Mrs. Max, 2523 S. Marlan St.
Francis, Mrs. William C., 2134 Luster St.
George, Mrs. Justus W., 1510 Orland St.
German, Mrs. Walter A. Jr., 2659 Luster St.
Giddings, Mrs. Frank C., 1211 S. Pickwick St.
Glynn, Mrs. Robert R., 1101 Benton St.
Gorelick, Mrs. David P., 1041 Linwood Ter.
Gose, Mrs. Don F., 1339 S. Delaware St.
Hahn, Mrs. Andrew L., 1344 E. Portland St.
Hall, Mrs. David W., 2122 Wayland Drive
Hall, Mrs. Durward G., Route 12, Box 980
Hanan, Mrs. Ernest B., 724 E. Kingsbury St.
Harvey, Mrs. Harold D., 1853 S. Broadway
H'Doubler, Francis T., Route 7
H'Doubler, Mrs. Francis T. Jr., 2336 E. Glenwood St.
Hollis, Mrs. Richard, 2178 Catalina St.
Holmes, Mrs. Daniel E., 2115 Cedarbrook St.
Horton, Mrs. James D., 1235 E. Delmar St.
Ivy, Mrs. H. B., 215 E. Sunshine Dr.
Jameson, Mrs. James E., 2753 Luster St.
Johnson, Mrs. Warford B., 2244 Edgewood St.
Johnson, Mrs. William F., 1858 S. Jefferson St.
Johnston, Mrs. Joseph L., 1855 S. Jefferson St.
Jorel, Mrs. Louis E., 2125 S. Dollison St.
Key, Mrs. James S., 2117 Valley Road
Klingner, Mrs. George Malcolm, 2003 E. Sunshine St.
Knabb, Mrs. Henry F. Jr., Route 8, Box 1078
Knabb, Mrs. Kenneth E., 1229 E. Catalpa St.
Kolze, Mrs. Vernon W., 1854 Valley Road
Kooiker, Mrs. Clarence, 1512 S. Kings St.
Langston, Mrs. Walter Roland, 1453 S. Fairway Ter.
Lemmon, Mrs. George Bruce Jr., 648 S. Florence St.
Leslie, Mrs. James F., 1418 Benton St.
Litton, Mrs. Lyle D., 3044 Shalimar St.
Lockhart, Mrs. Charles E., 1600 E. Catalpa St.
Lorenc, Mrs. Ernest, 2554 S. Luster St.
Lowe, Mrs. Horace Arch Jr., 1700 E. Walnut St.
Lurie, Mrs. Harold H., 2433 Langston St.
McAlhaney, Mrs. Howard J., 1643 E. Catalpa St.
McCraw, Mrs. Doyle C., 711 N. Main, Bolivar
Maple, Mrs. Francis M., 2330 Mirabeau St.
Menchetti, Mrs. Don E., 207 West Cherokee St.
Moore, Mrs. DeArmond, U. S. Medical Center
Moseley, Mrs. F. Thomas, 2102 S. Dollison St.
Napper, Mrs. Marvin L., Ash Grove
Overend, Mrs. Don S., 2215 Catalina St.
Palcheff, Mrs. Chris L., 1939 E. Wayland St.
Park, Mrs. William I. Jr., 815 E. Portland St.
Penninger, Mrs. Wm. H., 2246 E. Claiborne St.
Peterson, Mrs. Stanley S., 721 E. Stanford St.
Plumlee, Mrs. Wm. C., 919 E. Walnut St.
Polk, Mrs. John W., 1560 S. Delaware St.
Powell, Mrs. Edwin M., 807 S. Weller St.
Prater, Mrs. Bill George, 3000 Carlisle Circle
Pruett, Mrs. Paul L., 1036 E. Sunshine St.
Rigney, Mrs. Levi M., 2224 Edgewater St.
Roper, Mrs. Stanley D., Ozark
Russell, Mrs. Earl D., 2102 Cinderella St.
Scanlon, Mrs. Robert C., 2429 S. Kings St.
Schwartz, Mrs. Eugene J., 1315 E. Loren St.
Schweitzer, Mrs. Fred C. Jr., 2550 S. Luster St.
Sewell, Mrs. Walter S., 2707 S. Marlan St.
Siceluff, Mrs. Joseph C., Route 3
Silsby, Mrs. Don, 932 S. Pickwick St.
Simpson, Mrs. Albert P., 2202 Barataria St.
Simpson, Mrs. Emerson L., 1023 E. Portland St.
Smith, Mrs. Harvey Sydney, 963 S. Delaware St.
Snead, Mrs. William H. Jr., 2532 Sheridan St.
Stamm, Mrs. Richard, 601 S. Florence St.
Stewart, Mrs. Robert Bell, 2360 E. Grand St.
Stewart, Mrs. R. Wendell, 2028 Windsor Drive
Sturtevant, Mrs. H. N., 956 S. Fremont St.
Tarresch, Mrs. Ernest L., 2114 Langsto St.
Thomasson, Mrs. David Delzell, 2311 E. Glenwood St.
Tillman, Mrs. Walter W. Jr., 1220 E. Loren St.
Turner, Mrs. Glen O., 1462 S. Dollison St.
Upshaw, Mrs. Paul O., 2222 Inglewood St.
Vail, Mrs. A. Denton, 1307 E. Catalpa St.
Wakeman, Mrs. Jasper Newton, 1402 E. Meadowmere St.
Walker, Mrs. William N., 1930 Arcadia Ave.
Webb, Mrs. Leslie Richard, 1243 Loren St.
White, Mrs. R. Ned, 307 Cordova Court
Williams, Mrs. John Westyfield, 2245 Fritts St.
Wise, Mrs. Gordon F., 2850 Southern Hills Blvd.
Wittmer, Mrs. S. C., 2314 E. Washita St.
Wood, Mrs. William W., 1854 E. Berkeley St.
Wooldridge, Mrs. Wilfred E., 1126 E. Stanford St.
Yancey, Mrs. Daniel L., 1133 S. Weller St.

### JACKSON COUNTY
### (Kansas City)

Aaron, Mrs. George, 612 W. 69th St. 13
Agee, Mrs. L. G., 1101 E. 110th St. 31
Allebach, Mrs. Hobart, 3810 W. 65th Ter., Shawnee Mission, Kan.
Allen, Mrs. Charles H., 616 W. Maple St., Independence
Allen, Mrs. William Bayne, 6416 Ensley Lane, Shawnee Mission, Kan.
Altomare, Mrs. Edward, 1030 W. 65th St. 13
Altringer, Mrs. Arthur, 6530 Mission Dr., Shawnee Mission, Kan.
Anderson, Mrs. Richard W., 1001 Romany Road 13
Anderson, Mrs. Raymond, 6024 State Line 13
Andrus, Mrs. Bailey C., 6508 Overbrook Road, Shawnee Mission, Kan.
Arms, Mrs. Arnold, 6421 High Drive, Shawnee Mission, Kan.
Arst, Mrs. H. E., 1825 E. 89th Ter. 31
Aschman, Mrs. T. H., 8740 Brooklyn St. 30
Asher, Mrs. Graham, 5410 State Line, Shawnee Mission, Kan.
Atcheson, Mrs. Bellfield, 6524 Overhill Road, Shawnee Mission, Kan.
Atwell, Mrs. Floyd C., 630 West 60th Ter. 13
Ayres, Mrs. Samuel, 305 W. 51st Ter. 12
Bachmann, Mrs. Paul L., 1206 W. Truman Road, Independence
Baker, Mrs. P. J., 11440 E. 47th St. 33
Ballard, Mrs. V. Bryce, 4408 W. 74th Ter., Prairie Village, Kan.
Bare, Mrs. Chester I. Jr., 11705 E. 51st St., Raytown 33
Barelli, Mrs. Pat, 5609 Mission Drive, Shawnee Mission, Kan.
Barnard, Mrs. John L., 444 W. 67th St. 13
Barnes, Mrs. Robert H., 6714 Kenwood Ave. 31
Barnett, Mrs. Gordon P., 6568 High Drive, Shawnee Mission, Kan.
Barry, Mrs. John W., 217 West 67th Terr. 13
Barry, Mrs. William B., 4600 Nichols Parkway 12
Bay, Mrs. Merrill R., Woods Chapel Road, Blue Springs 7
Becker, Mrs. R. R., 5622 Holmes St. 10
Bennett, Mrs. James D., 3216 W. 69th St., Shawnee Mission, Kan.
Benoit, Mrs. Hector W. Jr., 2501 W. 64th St., Prairie Village, Kan.
Berenson, Mrs. Sheldon, 832 W. 63rd St. 13

Bernreiter, Mrs. Michael, 1246 W. 63rd St. 13
Berry, Mrs. Maxwell, 5020 Summit St. 12
Berry, Mrs. Neill, 1025 West 62nd St. 13
Biggs, Mrs. Harry L., 9504 E. 63rd St., Raytown 33
Bikales, Mrs. Victor W., 5810 High Drive, Prairie Village, Kan.
Bills, Mrs. Marvin, 3309 W. 68th St., Shawnee Mission, Kan.
Black, Mrs. Don A., 2700 W. 67th St., Prairie Village, Kan.
Black, Mrs. Eugene C., 3201 W. 67th St., Shawnee Mission, Kan.
Blim, Mrs. Richard D., 3204 W. 71st St., Prairie Village, Kan.
Bohan, Mrs. Peter, 420 E. Armour Blvd. 9
Bolin, Mrs. N. V., 5720 Howe Drive, Shawnee Mission, Kan.
Bordy, Mrs. Marvin, 8710 Belleview St. 14
Borenstine, Mrs. Joseph, 7307 Holmes St. 10
Boughnou, Mrs. H. P., 660 W. 61st Ter. 13
Bourke, Mrs. Timothy, 4535 Rockhill Ter. 10
Bowser, Mrs. John F., 3701 Madison St. 11
Brams, Mrs. Jack B., 5050 Oak St. 12
Braverman, Mrs. Abe Elliott, 611 E. 109th Ter. 31
Bridgens, Mrs. James G., 1025 Huntington Road
Brown, Mrs. Adrian J., 12 E. 63rd St. 13
Brown, Mrs. Irwin, 3301 W. 68th St., Shawnee Mission, Kan.
Brown, Mrs. William R., 8124 Lee Blvd., Shawnee Mission, Kan.
Bruner, Mrs. Robert, 912 Valentine Road 11
Brust, Mrs. Carl H., 6114 Howe Drive, Mission, Kan.
Buckner, Mrs. Robert C., 3507 W. 87th St., Shawnee Mission, Kan.
Budke, Mrs. Harold A., 1219 W. 66th Ter. 13
Buhler, Mrs. Victor B., 5212 Bellview St. 12
Buie, Mrs. Bruce R., 6905 East 113th Ter. 34
Bunting, Mrs. Williston, 1231 W. 62nd St. 13
Butcher, Mrs. Robert W., 1101 W. 86th Ter. 14
Byers, Mrs. Philip, 5832 High Drive, Shawnee Mission, Kan.
Caffrey, Mrs. Raymond J., 1314 W. Red Bridge Road 14
Calwell, Mrs. John K., 436 E. 65th Ter. 31
Calovich, Mrs. Emery R., 3500 W. 49th St., Kansas City 3, Kan.
Campbell, Mrs. Frederick B., 1032 W. 55th St. 13
Campbell, Mrs. John, 827 W. 60th Ter. 13
Carbaugh, Mrs. Glenn C., 1234 Huntington Road 13
Carlson, Mrs. H. E., 2025 W. 48th Ter., Shawnee Mission, Kan.
Carmichael, Mrs. Francis, 5750 Oakwood St., Prairie Village, Kan.
Carrier, Mrs. Edwin C., 2410 W. 64th St., Shawnee Mission, Kan.
Casady, Mrs. Gilbert N., 9830 Aberdeen Drive, Prairie Village, Kan.
Casford, Mrs. Ralph, 1236 W. 72nd St. 14
Chambers, Mrs. James Q. Jr., 5500 Belinder Road, Shawnee Mission, Kan.
Chambers, Mrs. James Q. Sr., 3624 Holmes St. 9
Chapman, Mrs. Arthur H., 1020 W. 70th Ter. 13
Cheeseman, Mrs. Wm. B., 5302 W. 79th Ter., Prairie Village, Kan.
Clark, Mrs. Irving Howard, RFD 1, Grandview
Cochrane, Mrs. Joseph J., 9615 Grandview Road 34
Cockerell, Mrs. S. F., 3501 S. Chrysler St., Independence
Cohen, Mrs. Harry, 417 W. 70th St. 13
Cohen, Mrs. Hilliand, 1291 W. 72nd Ter. 14
Coffey, Mrs. Ralph R., 814 Rockwell Lane 12
Cooper, Mrs. Charles S., 1035 W. Meyer Circle 13
Counsell, Mrs. C. M., 708 W. 17th St. 8
Cox, Mrs. Kenneth E., 5640 Pembroke Lane, Prairie Village, Kan.
Cramer, Mrs. Quentin, 3615 West 83rd Ter., Prairie Village, Kan.
Cross, Mrs. Walter M., 4511 Holmes St. 10
Culbertson, Mrs. William F., 1253 Huntington Road 13
Curran, Mrs. Desmond, 6626 Wenonga Ter., Prairie Village, Kan.
Curts, Mrs. Calvin J., 7419 Terrace St. 14
Cutcliff, Mrs. D. J., 415 E. 66th St. 10
Dann, Mrs. David S., 1215 W. 67th St. 13
Davis, Mrs. Herbert V., 4601 Holmes St. 10
Davis, Mrs. Jack M., 4417 Blue Ridge Blvd. 33
Davis, Mrs. Robert C., 659 W. 61st St. Ter. 13
Decker, Mrs. Albert I., 3000 West 73rd St., Prairie Village 15, Kan.
DeMott, Mrs. John D., 4402 Homestead Drive, Prairie Village, Kan.
Demotte, Mrs. John A., 1247 W. 56th St. 13
Dennie, Mrs. Charles C., 2600 Verona Road, Shawnee Mission, Kan.
DeWeese, Mrs. E. R., 3316 W. 69th St., Shawnee Mission, Kan.
Dlabal, Mrs. L. J., 3729 Blue Ridge Blvd., Independence
Dodge, Mrs. Mark, 5820 State Line, Shawnee Mission, Kan.
Dolezal, Mrs. Joseph B., 7928 Outlook, Prairie Village, Kan.
Dorsch, Mrs. Ervin H., 3516 Claremont St., Independence
Downey, Mrs. James W., 2400 West 51st Ter., Shawnee Mission, Kan.
Drake, Mrs. Roy F., 6200 W. 62nd Ter., Mission, Kan.
Draney, Mrs. Thomas, 6415 Main St. 13
Draney, Mrs. Thomas E., 6426 Holmes St. 31
Duncan, Mrs. Ralph E., 1267 W. 61st St. 13
Duncan, Mrs. William H., 501 Porte Cimi Pas 10
Dunnell, Mrs. Monaford D., 1011 W. 1st St., Lee's Summit
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Eiseman, Mrs. Gustave, 7908 Campbell St. 13
Elias, Mrs. David J., 10311 Sheley Road, Independence
Elliott, Mrs. B. Landis, 4712 Roanoke Parkway 12
Elliott, Mrs. R. Glenn, 6136 Reinhardt Drive, Mission, Kan.
Engleking, Mrs. David, 10508 E. 60th Ter., Raytown 33
Eshelman, Mrs. Albert D., 12116 E. 46th St. 33
Etzenhouser, Mrs. Merrill, 1215 W. 35th Ter., Independence
Etzenhouser, Mrs. Russell D., 1317 W. College St., Independence
Eubank, Mrs. Will R., 6112 Lane, Raytown 33
Eubank, Mrs. W. Y., 6411 Morningside Drive
Fanney, Mrs. Jacob P., 2721 West 69th St., Shawnee Mission, Kan.
Farnsworth, Mrs. Jesse J., 5608 Fairway, Shawnee Mission, Kan.
Feierabend, Mrs. Frank L., 7345 Wyoming St. 14
Feist, Mrs. George V., 2400 Tomahawk Road, Prairie Village, Kan.
Ferguson, Mrs. Eugene H., 333 W. Meyer Blvd. 13
Ferguson, Mrs. James T., 718 East Armour Blvd. 9
Ferris, Mrs. Carl R., 629 West 70th Ter. 13
Findley, Mrs. J. W., 14 West 57th Ter. 13
Fitzgerald, Mrs. Robert H., 2700 W. 69th St., Shawnee Mission, Kan.
Flanders, Mrs. Horace F., 3820 West 65th Ter., Prairie Village, Kan.
Flanders, Mrs. V. E., 6646 Nall Drive, Mission, Kan.
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Forman, Mrs. Louis H., 2801 West 67th St., Shawnee Mission, Kan.
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Fouts, Mrs. Dallas B. Sr., 10901 Winner Road, Independence
Fowler, Mrs. Fred, 4911 Pawnee Drive, Shawnee Mission, Kan.
Fowler, Mrs. James W., 7708 Briar Drive, Prairie Village, Kan.
Francisco, Mrs. Clarence B., 3621 Wyncote Lane, Shawnee Mission, Kan.
Fredeen, Mrs. Robert C., 5437 Canterbury Road, Shawnee Mission, Kan.
Frick, Mrs. J. Paul, 116 Huntington Road, Shawnee Mission, Kan.
Frick, Mrs. J. Paul, 116 Huntington Road 13
Friedman, Mrs. Morris L., 2516 W. 69th St., Shawnee Mission, Kan.
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Fulton, Mrs. Albert E., 7245 Terrace St. 14
Gainey, Mrs. Harold L., 6438 Indian Lane, Shawnee Mission, Kan.
Ganley, Mrs. Wm. Coyle, 8400 Overhill Drive 38
Gard, Mrs. Raymond F., 10901 Winner Road, Independence
Garrison, Mrs. Roy F., 404 W. 67th Ter. 13
Geha, Mrs. Braham, 9814 Lee Blvd., Leawood, Kan.
Gempel, Mrs. Paul A., 315 Nichols Road
Gestring, Mrs. Hugh A., 3915 West 90th Ter., Shawnee Mission, Kan.
Gibson, Mrs. David M., 5318 Sunset Drive 12
Gilkey, Mrs. Winona Padgett, Greenleaf, Kan.
Gillmor, Mrs. C. Stewart, 420 E. Armour Blvd.
Ginsberg, Mrs. Norman A., 1220 W. 67th St. 12
Gist, Mrs. W. W., 1208 59th St. 13
Goldman, Mrs. Stanley, 5734 Windsor Drive, Mission, Kan.
Goldsich, Mrs. Edward, 5115 W. 81st St., Prairie Village, Kan.
Goodman, Mrs. Leroy, 2119 W. 70th Ter., Shawnee Mission, Kan.
Goodson, Mrs. W. H., 46 E. 54th St. 12
Goolsbee, Mrs. Robert L., 6438 Sagamore St., Shawnee Mission, Kan.
Gottsch, Mrs. Joseph C., 2701 W. 48th Ter., Shawnee Mission, Kan.
Grabske, Mrs. Charles F., 1314 W. Truman Road, Independence
Graham, Mrs. Wallace H., 5157 Ward Parkway 12
Green, Mrs. John R., 3424 Norton St., Independence
Green, Mrs. Stanley L., 1248 S. McCoy St., Independence
Greene, Mrs. Wallace, 2008 W. 68th St., Shawnee Mission, Kan.
Griffith, Mrs. George, 4010 Harrison St. 10
Griffith, Mrs. John, 6500 Granada Drive, Shawnee Mission, Kan.
Growdon, Mrs. John, 1207 Stratford Road 13
Gundle, Mrs. Sigmund, 5926 Windsor Drive, Mission, Kan.
Haight, Mrs. John M., 5609 Blue Ridge Blvd. 33
Haley, Mrs. Jack, 7909 Cambridge St., Prairie Village, Kan.
Hall, Mrs. Thomas B., 5632 Mission Road, Shawnee Mission, Kan.
Halperin, Mrs. Phillip, 1001 W. 56th St. 13
Hamel, Mrs. Herbert A., 6441 High Drive
Hamill, Mrs. Robert W., 6945 Nieman Road, Shawnee Mission, Kan.
Hanna, Mrs. Minford A., 7427 Village Drive, Prairie Village, Kan.
Harless, Mrs. Morris, 6844 Cherry St. 31
Hartwig, Mrs. Frederick H., 5204 Pawnee Drive, Shawnee Mission, Kan.
Haynes, Mrs. Solon E., 5306 Holmes St. 10
Hazen, Mrs. Robert M., 9919 Ensley Lane, Leawood, Kan.
Heller, Mrs. B. Marcus, 627 West 68th Ter. 13
Helman, Mrs. Richard G., 6540 Wenonga Road, Shawnee Mission, Kan.
Henry, Mrs. Clarke L., 6616 Wenonga Ter., Shawnee Mission, Kan.
Henry, Mrs. S. David, Route 2, Quivira Lake, Kansas City 6, Kan.
Herrman, Mrs. George, 828 Greenway Ter. 13
Hess, Mrs. H. Lewis, 750 W. 47th St. 12
Hess, Mrs. Paul D., 8423 High Drive, Leawood, Kan.

Hibbard, Mrs. Blaine, 5211 Sunset Drive 12
Hill, Mrs. Jack Harold, 8115 Meadow Lane, Shawnee Mission, Kan.
Hink, Mrs. Fred W., 524 Handy St., Independence
Hodgson, Mrs. Frank H., 1049 W. 55th St. 13
Hoeper, Mrs. Sam, 13009 12th, Grandview
Hoffman, Mrs. J. S., 5820 Cherokee Drive, Shawnee Mission, Kan.
Hoffman, Mrs. R. Lee, 5820 Rainbow Ave., Prairie Village, Kan.
Holbrook, Mrs. Ralph, 700 West 48th St.
Hollweg, Mrs. Kenneth C., 808 W. Meyer Blvd. 13
Holman, Mrs. Melvin V., 4815 West 103rd St., Overland Park, Kan.
Holton, Mrs. Edward, 2817 Westport Road, Independence
Hook, Mrs. Waller G., 9238 State Line, Leawood, Kan.
Hornstra, Mrs. Robin, 10401 W. 73rd St., Shawnee, Kan.
Howard, Mrs. Joseph, 6026 McGee St. 13
Hungate, Mrs. Carroll P., 6845 Oak St. 13
Hunt, Mrs. Claude, 615 W. 56th St. 13
Hunter, Mrs. Martin P., 6532 Belinder St., Shawnee Mission, Kan.
Hunzicker, Mrs. Warren J., 1248 Stratford St.
Ingham, Mrs. Walton C., 9723 Overbrook Road, Leawood, Kan.
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Jackson, Mrs. Carl A., 2305 West 79th St., Shawnee Mission, Kan.
Jackson, Mrs. Jabez N., 4600 Nichols Parkway 12
Jacob, Mrs. Walter P., 1002 Romany Road 13
Jacobs, Mrs. Morton, 6416 Verona Road, Prairie Village, Kan.
Jacobs, Mrs. Walter, 6656 Milhaven Drive, Shawnee Mission, Kan.
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Jansen, Mrs. Robert, 440 East 66th St. 31
Jarvis, Mrs. James A., 600 E. 57th St. 13
Jeffries, Mrs. Robert C., 8505 Belinder Drive, Shawnee Mission, Kan.
Johns, Mrs. Leo E. Jr., 10217 Tracy St. 31
Johnson, Mrs. Joseph E., 9915 Flora St. 31
Jonas, Mrs. Harry S., 10901 Winner Road, Independence
Jones, Mrs. T. Reid, 5927 Lockton Lane, Mission, Kan.
Justus, Mrs. John B., 5221 Howe Drive, Shawnee Mission, Kan.
Kantor, Mrs. Julius, 6708 High Drive, Shawnee Mission, Kan.
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Kaul, Mrs. Philip G., 5310 Mission Woods, Kansas City 3, Kan.
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Keeler, Mrs. James E., 651 W. 57th St. 13
Kendall, Mrs. Charles A., 658 Red Road, Independence
Kennard, Mrs. G. Keith, 6109 Buena Vista, Mission, Kan.
Kent, Mrs. Bela K., 5839 Cherokee Drive
Kepner, Mrs. John W., 3425 Holmes St.
Kerr, Mrs. Russell, 5938 Blue Hills Road 4
Ketcham, Mrs. William, 429 E. Meyer Blvd. 31
Kettner, Mrs. George, 6510 Milhaven Drive, Mission, Kan.
Kienberger, Mrs. Paul A., 10605 E. 35th Ter., Independence
Kiene, Mrs. Richard H., 5835 High Drive, Shawnee Mission, Kan.
Kimball, Mrs. Merritt H., 610 E. 36th St. 9
King, Mrs. Tenbrook, 8228 Linden Drive, Prairie Village, Kan.
Kitchen, Mrs. William M., 1209 West 58th St. 13
Klein, Mrs. E. H., 7011 Roe Blvd., Prairie Village, Kan.
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Koehler, Mrs. Charles, 4834 Holly St. 12
Kohn, Mrs. C. M., 4618 Warwick Blvd. 2
Korth, Mrs. William M., 6615 Overhill Road, Shawnee Mission, Kan.
Kranson, Mrs. Seymour, 11 Hawthorne Place, Independence
Kyger, Mrs. Fred B., 637 W. 67th Ter. 13
Lacy, Mrs. N. Eugene, 445 W. 68th Ter. 13
Lally, Mrs. James J., 800 W. 52nd Ter. 12
Lamar, Mrs. Frederick C., 803 W. 48th St. 12
Lamar, Mrs. Robert F., 800 W. 53rd Ter. 12
Lapp, Mrs. Harry C., 5235 Rockhill Road 10
Latham, Mrs. R. W., 3008 W. 67th St., Prairie Village, Kan.
Laughlin, Mrs. E. O., Chatham Hotel, 3701 Broadway
Layton, Mrs. Ira C., 1025 Greenway Ter. 13
Leifer, Mrs. W. W., 2001 W. 70th St., Prairie Village, Kan.
Leitch, Mrs. C. G., Route 2, Box 222, Blue Springs
Leitz, Mrs. Frank B., 6832 Locust St. 31
Lemoine, Mrs. Albert N. Sr., 9200 High Drive, Shawnee Mission, Kan.
Lentz, Mrs. Clark H., Neosho Ave., Shawnee Mission, Kan.
Leo, Mrs. William A., 4503 W. 66th St., Prairie Village, Kan.
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Lichtor, Mrs. Alexander, 5436 Neosho St., Shawnee Mission, Kan.
Lichtor, Mrs. Joseph, 2109 W. 70th St. 13
Lieberman, Mrs. B. A. Jr., 424 W. 70th St.
Lierch, Mrs. Joseph, 815 E. Gregory Blvd.
Lilly, Mrs. Terry E. Jr., 6516 Belinder Road, Shawnee Mission, Kan.
Link, Mrs. Vance E., 1201 W. 36th St., Independence
Lloyd, Mrs. Ivan E., 820 N. Union St., Independence
Long, Mrs. R. Stacy, 3343 Blue Ridge St., Independence
Lowell, Mrs. Paul, 4742 Liberty St. 12
Lyddon, Mrs. H. R., 1221 W. 67th St.
Lytton, Mrs. George J., 3408 W. 79th St., Prairie Village, Kan.
McCanse, Mrs. Andrew, 4706 Broadway
McCanse, Mrs. Raymond, 411 W. 50th St. 12
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McConchie, Mrs. James, 2719 S. Crysler St., Independence
McCoy, Mrs. Fred, 5720 Foster St. Shawnee Mission, Kan.
McCubbin, Mrs. C. Roy, 53 Janssen Place 9
McCunniff, Mrs. William B., 3719 Jarboe St. 11
McDonald, Mrs. Victor G. Jr., 8817 Aberdeen St., Leawood, Kan.
McDonnell, Mrs. John F., 5411 Central St. 13
McFarland, Mrs. Donald, 5830 High Drive, Shawnee Mission, Kan.
McGannon, Mrs. Paul F., 4806 Pawnee St., Shawnee Mission, Kan.
McGuire, Mrs. Thomas H., 5426 Sherwood Drive, Shawnee Mission, Kan.
McHale, Mrs. Thomas C., 3003 W. 90th Ter., Shawnee Mission, Kan.
McKee, Mrs. Joseph W., Wornall Plaza, 310 W. 49th St. 12
McKee, Mrs. Wallace P., 3415 W. 74th Ter., Prairie Village, Kan.
McLeod, Mrs. John, 9 E. 67th St. 13
McMillan, Mrs. Thomas E., 3409 W. 68th St., Shawnee Mission, Kan.
McVay, Mrs. James, 856 W. 62nd St. 13
McVay, Mrs. James R. Jr., 1233 W. 63rd. Ter. 13
MacNaughton, Mrs. Robert A., 3208 W. 101st St., Shawnee Mission, Kan.
Mantz, Mrs. Herbert L., 1209 Romany Road
Marks, Mrs. Mark M., 6537 Summit St. 13
Marshall, Mrs, Cameron F., 2500 West 65th St., Shawnee Mission, Kan.
May, Mrs. James W., 3501 W. 63rd St., Shawnee Mission, Kan.
Mayer, Mrs. John, 829 W. 55th St. 13
Melgaard, Mrs. Ross, 6831 Cherry St. 31
Meyer, Mrs. Paul, 31 E. 68th Ter. 13
Meyers, Mrs. Harold L., 1901 Brookwood Road, Shawnee Mission, Kan.
Miles, Mrs. George O., 2231 West 63rd St., Shawnee Mission, Kan.
Miller, Mrs. Clint L., 201 Madison St., Lee's Summit
Miller, Mrs. Gerald L., 836 W. 51st St. 12
Miller, Mrs. Max I., 4001 W. 66th St., Shawnee Mission, Kan.
Miller, Mrs. Wade H., 16 E. 54th St. 12
Miller, Mrs. Wilson H., 6400 Verona Road, Shawnee Mission, Kan.
Mixson, Mrs. William C., 6501 Sagamore Road, Shawnee Mission, Kan.
Montgomery, Mrs. James G., 5049 Wornall Road 12
Mooney, Mrs. Justin, 5717 Windsor Road, Shawnee Mission, Kan.
Mooney, Mrs. Marcel L., 6439 Ensley Lane, Shawnee Mission, Kan.
Morrow, Mrs. Raymond, 17 W. 69th St. 13
Moriarty, Mrs. Lauren, 1239 W. 61st Ter. 13
Morgan, Mrs. David B., 6513 Jefferson St. 13
Moss, Mrs. Paul, 420 E. 64th Ter. 31
Mosser, Mrs. Robert S., 3114 Norton St., Independence
Mueller, Mrs. M. J., 6441 Holmes St.
Mullen, Mrs. Leo M., 4443 Paseo Blvd. 10
Murphy, Mrs. Edward S., 836 W. 62nd St. 13
Murphy, Mrs. Robert J., 6428 High Drive, Shawnee Mission, Kan.
Myers, Mrs. John S., 5401 W. 65th Place, Shawnee Mission, Kan.
Myers, Mrs. Robert M., 804 W. 65th St.
Myers, Mrs. Wilson A., 425 Huntington St.
Naime, Mrs. Mansaur J., 5209 W. 79th St., Prairie Village, Kan.
Nash, Mrs. George W., 4017 Booth St., Kansas City 3, Kan.
Needels, Mrs. Orval T., 207 W. 67th Ter.
Nelson, Mrs. B. A., 6842 Cherry St.
Nesselrode, Mrs. J. H., 3510 S. McCoy St., Independence
Nickson, Mrs. Charles E., 4425 Larson St.
Nicolay, Mrs. Kenneth S., 4049 Brookridge Drive, Mission, Kan.
Nigro, Mrs. E. Robert, 834 W. 61st Ter. 13
Noltensmeyer, Mrs. Milton. 3305 W. 50th Ter., Shawnee Mission, Kan.
Nunn, Mrs. P. M., 3418 Karnes Blvd. 11
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O'Neil, Mrs. James, 6729 Rockhill Road 31
Overesch, Mrs. Harry B., 6215 Ensley Lane, Shawnee Mission, Kan.
Ozar, Mrs. Milton, 109 E. Dartmouth Road
Padfield. Mrs. Earl, 1900 W. 61st St. Ter., Shawnee Mission, Kan.
Pakula, Mrs. Sidney F., 5225 Charlotte St. 10
Pallett, Mrs. Harold A., 4618 Warwick St.
Parker, Mrs. Hubert M., 1200 W. Red Bridge Road 14
Passman, Mrs. Harold, 416 E. 72nd Ter.
Pearson, Mrs. Paul, 5820 Howe Drive, Shawnee Mission, Kan.
Peete, Mrs. Don Carlos, 3717 Belleview St. 11
Perll, Mrs. Maurice F., 830 W. 61st Ter. 13
Perry, Mrs. Ralph, 7140 Sni-A-Bar Road 29
Peterson, Mrs. Milton C., 3000 W. 67th St., Shawnee Mission, Kan.
Petry, Mrs. E. L., 6520 Reeds Drive, Shawnee Mission, Kan.
Pfeutze, Mrs. Edwin, 3105 W. 71st St., Prairie Village, Kan.
Pinsker, Mrs. Oscar T., 6541 Granada Lane, Prairie Village, Kan.
Piper, Mrs. Donald K., 3301 E. Meyer Blvd. 32
Pipkin, Mrs. Garrett, 5427 Baltimore St. 12
Pollock, Mrs. Leo, 5235 Rockhill Road 10
Pope, Mrs. Charles H., 14401 E. 40th St., Independence
Porter, Mrs. Louis, 6017 McGee St.
Potter, Mrs. Lee G., 6904 Valley Road 13
Powers, Mrs. John M., 3838 Blue Ridge Blvd., Independence

Preston, Mrs. Albert, 606 W. Meyer Blvd.
Printz, Mrs. Joseph, 820 W. 64th Ter.
Pugh, Mrs. Richard, 600 Dickinson Road, Independence
Quer, Mrs. Erich A., 6820 Tomahawk Road, Shawnee Mission, Kan.
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Ramey, Mrs. Ehret O., 8907 Belleview St. 14
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Reinhardt, Mrs. G. Robert, 600 E. 66th St. 10
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Richert, Mrs. Robert C., 504 W. 96th St. 14
Riller, Mrs. L. E., 3724 Holmes St. 9
Rinkel, Mrs. Herbert, 6405 Sagamore Road, Prairie Village, Kan.
Roberts, Mrs. Harold M., 1005 Brentwood Circle 12
Roberts, Mrs. Sam E., 5964 Overhill Road, Shawnee Mission, Kan.
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Robinson, Mrs. E. Kip, 1015 W. 58th Ter. 13
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Robinson, Mrs. William J., 9931 Lee Circle, Leawood, Kan.
Robison, Mrs. Travis, 600 W. Dartmouth Road 13
Rubin, Mrs. Sidney, 1287 West 72nd St.
Rubnitz, Mrs. Leon, 210 W. 94th St. 14
Saferstein, Mrs. Lester A., 6859 Cherry St. 31
Samuelson, Mrs. Edward A., 1000 W. Gregory Blvd. 14
Sanders, Mrs. Clarence, 4700 Roanoke Parkway 12
Sanders, Mrs. William F., 6419 Wornall Ter.
Sauer, Mrs. Gordon C., 5536 Central St. 13
Saunders, Mrs. Everett, 3839 S. Crysler St., Independence
Schaerrer, Mrs. W. C., 5245 Mercier St. 12
Schechter, Mrs. Nathan, 5723 Windsor Drive, Mission, Kan.
Schiffmacher, Mrs. Jack E., 4517 W. 65th St., Prairie Village, Kan.
Schorer, Mrs. Edwin, The Walnuts 12
Schottman, Mrs. G. W., 5902 W. 77th Ter., Prairie Village, Kan.
Schutz, Mrs. Richard B., 3913 W. 57th Ter., Shawnee Mission, Kan.
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Seely, Mrs. Clark W., 3000 W. 68th St., Shawnee Mission, Kan.
Shapiro, Mrs. L. M., 6429 Holmes St. 31
Sheldon, Mrs. Russell D., 816 W. 58th Ter. 13
Shifrin, Mrs. Alexander, 6824 Holmes St.
Shireman, Mrs. Kenneth L., 4415 Sunrise Drive 23
Shuey, Mrs. Herbert, 933 E. 77th Ter. 31
Shumate, Mrs. D. L., 3703 Penn St. 11
Shypper, Mrs. M. J., 4738 Oak St. 12
Simon, Mrs. Sanford, 8129 Rosewood St., Shawnee Mission, Kan.
Sinclair, Mrs. Alexander B., 211 West Concord St. 2
Singleton, Mrs. J. Milton, 835 W. 53rd Ter. 12
Skillman, Mrs. Robert K., 10335 High Drive, Leawood, Kan.
Skinner, Mrs. John O., 5108 Grand Ave. 12
Skinner, Mrs. John T., 824 Westover Road 13
Slentz, Mrs. Edwin L., 4812 W. 66th Ter., Shawnee Mission, Kan.
Slentz, Mrs. W. A., 441 W. 59th Ter. 13
Slickman, Mrs. Robert, 4937 Wyoming St. 12
Smith, Mrs. Arthur B., 10130 Pawnee Lane, Leawood, Kan.
Smith, Mrs. Dale C., 5212 Reinhardt St., Shawnee Mission, Kan.
Smith, Mrs. Ira T., 3900 W. 90th Ter., Shawnee Mission, Kan.
Sneid, Mrs. Philip, 4201 W. 90th Ter., Overland Park, Kan.
Snider, Mrs. Sam H., 722 Ward Parkway 12
Spafford, Mrs. Allen, 5552 Belinder Ave., Shawnee Mission, Kan.
Spurny, Mrs. Otto M., 10 East 68th Ter. 13
Stacey, Mrs. Wallace R., 2624 S. Arlington St., Independence
Staggs, Mrs. Wm. A., 641 E. 45th St.
Staley, Mrs. Harry R., 5028 Sunset Drive 12
Statland, Mrs. Harry, 1016 W. 69th Ter.
Steffen, Mrs. L. F., 5521 Crestwood Drive 10
Stelle, Mrs. Charles W., 7549 Wyoming St.
Stelmach, Mrs. W. Jack, 6100 Morningside Drive 13
Stockton, Mrs. Raymond W., 5215 W. 81st St., Prairie Village, Kan.
Stockwell, Mrs. A. L., 5736 Windsor Drive, Mission, Kan.
Stratemeier, Mrs. Edward H., 9728 High Drive, Leawood, Kan.
Summers, Mrs. Caldwell B., 7312 Jarboe St. 14
Swisher, Mrs. Robert C., 6034 Lockton Lane, Shawnee Mission, Kan.
Szabados, Mrs. Ernest D., 1212 W. Truman Road, Independence
Tarson, Mrs. Soloman S., 837 W. Gregory Blvd.
Tasker, Mrs. Chas, B., 2721 W. 67th Ter., Shawnee Mission, Kan.
Terrill, Mrs. Robert S., 10223 Lee Blvd., Leawood, Kan.
Theel, Mrs. Otto, 5911 Howe Drive, Mission, Kan.
Thiele, Mrs. George H., 6526 High Drive, Prairie Village, Kan.
Thomas, Mrs. C. Y. Jr., 4206 Homestead Drive, Prairie Village, Kan.
Thompson, Mrs. C. Leslie, 1256 W. 61st Ter. 13
Thorn, Mrs. Druery R., 8200 Ensley Lane, Leawood, Kan.
Tice, Mrs. Wayne K., 1915 Lake Drive, Independence
Trimble, Mrs. William K., 6020 McGee St. 13
Trippe, Mrs. H. C., 8511 Lee St., Leawood, Kan.
Trowbridge, Mrs. E. H. Jr., 6436 High Drive, Shawnee Mission, Kan.
Tutera, Mrs. Dominic F., 9801 E. 59th Ter.
Twin, Mrs. Edward, 2921 West 67th Ter., Prairie Village, Kan.
Twyman, Mrs. Richard, 1020 W. 56th St.
Underwood, Mrs. Dick Holland, 2008 W. 95th St., Leawood, Kan.
Underwood, Mrs. Ross H., 5522 Aberdeen Road, Shawnee Mission, Kan.
Unger, Mrs. Harold, 400 W. 68th St. 13
Valentine, Mrs. Herbert S., 1020 W. 69th St. 13
Van Biber, Mrs. James T., 3705 Northern Blvd., Independence
Van Buskirk, Mrs. William C., 1909 W. 67th St., Shawnee Mission, Kan.
Van Del, Mrs. Dwight T., 6737 Rockhill Road 31
Vaughn, Mrs. James W., 2804 W. 77th St., Prairie Village, Kan.
Vilmer, Mrs. Charles E., 3016 W. 67th St., Shawnee Mission, Kan.
Vincent, Mrs. Jack C., 2003 W. 67th Ter., Shawnee Mission, Kan.
Virden, Mrs. Herbert H., 6533 High Drive, Shawnee Mission, Kan.
Voth, Mrs. Harold, 5413 Neosho St., Shawnee Mission, Kan.
Wade, Mrs. Frederick E., 6427 Wornall Ter. 13
Wakefield, Mrs. Franklin H., 8352 Overbrook Road, Leawood, Kan.
Walker, Mrs. James C., 609 E. 96th St.
Walker, Mrs. John W., 8320 Ensley Lane, Leawood, Kan.
Walker, Mrs. Orville, 2732 Crysler St., Independence
Wall, Mrs. Harry C., 6000 Howe Drive, Mission, Kan.
Wall, Mrs. Leonard A., 5011 Neosho Ave., Shawnee Mission, Kan.
Walthall, Mrs. Damon O., 6439 Jefferson St. 13
Webster, Mrs. Joseph G., 5532 Locust St. 10
Weiford, Mrs. Edward D., 2009 West 68th St., Shawnee Mission, Kan.
Welker, Mrs. Joseph E., 6447 Summit St. 13
Wheeler, Mrs. Charles B. Jr., 820 W. 57th St. 13
Wheeler, Mrs. John H., 5650 Mission Drive, Mission, Kan.
White, Mrs. Charles H., 6518 Overhill Road, Prairie Village, Kan.
White, Mrs. Stoughton F., 6815 Cherokee Lane, Prairie Village, Kan.
White, Mrs. William, 613 W. 57th Ter. 13
Whiteman, Mrs. John R., 9729 Cherokee Lane, Leawood, Kan.
Whitman, Mrs. Doyle, 6836 Cherokee Lane, Shawnee Mission, Kan.
Whitmore, Mrs. J. Stewart, 1039 West 58th St. 13
Wien, Mrs. Irving, 515 E. 78th St. 31
Wilhelm, Mrs. Warren, 3100 W. 67th St., Prairie Village, Kan.
Wilkinson, Mrs. E. A., 2300 W. 69th St.
Williams, Mrs. Delon A., 1252 Stratford Road 13
Williams, Mrs. Joseph C., 1231 W. 69th St.
Williams, Mrs. Roland D., 5320 Norwood St., Shawnee Mission, Kan.
Williams, Mrs. Vincent, 4400 Blue Ridge Blvd. 33
Willits, Mrs. Lyle G., 1224 W. 62nd St. 13
Willoughby, Mrs. Jean, 1019 W. 69th Ter. 13
Wilson, Mrs. Brickhouse, 700 Ward Parkway 12
Wilson, Mrs. Clifford C., 5531 Neosho Lane, Shawnee Mission, Kan.
Winer, Mrs. Herbert J., 8136 Rosewood Drive, Prairie Village, Kan.
Winston, Mrs. Bernard H., 1006 W. 67th St.
Wise, Mrs. George W., 4610 Homestead Drive, Prairie Village, Kan.
Wolf, Mrs. Jack W., 6125 Morningside Drive
Woodward, Mrs. W. W., 12914 East 39th Ter., Independence
Workman, Mrs. Charles, 5724 Walmer St., Mission, Kan.
Wortmann, Mrs. Robert F., 2819 W. 66th Ter., Shawnee Mission, Kan.
Wright, Mrs. R. Paul, 4902 Belinder Road, Shawnee Mission, Kan.
Wu, Mrs. William, 4414 Homestead Drive, Prairie Village, Kan.
Young, Mrs. James, 9817 Lee Circle, Leawood, Kan.
Young, Mrs. Paul R., 8503 E. 86th Ter., Raytown 38
Zellermayer, Mrs. Jack, 5801 Lockton Lane, Shawnee Mission, Kan.
Ziegler, Mrs. Allen, 8201 Tomahawk St., Shawnee Mission, Kan.
Ziegler, Mrs. Dewey K., 8347 Delmar Lane, Prairie Village, Kan.
Zoglin, Mrs. Nathan, 5901 Wyandotte St. 13
Zuber, Mrs. Harold V., 6800 Cherokee Lane, Shawnee Mission, Kan.

### JASPER COUNTY
### (Joplin)

Allen, Mrs. David O., 505 W. 34th St.
Barnett, Mrs. Norman, Route 3, Box 181, Tabor Woods
Birsner, Mrs. Frank, 1717 River St., Carthage
Black, Mrs. Mervin H., 615 Hampton Place
Burch, Mrs. John E., 1345 Crest Drive
Chesney, Mrs. George W., 2416 E. 12th St.
Cohle, Mrs. Richard, 1609 Lilac Lane, Carthage
Craig, Mrs. Irwin T., 2525 E. 12th St.
Crawford, Mrs. A. L., 2931 Pearl St.
Crispell, Mrs. Lawrence S., 911 Kensington St.
Curl, Mrs. Howard, 102 Moffet St.
DeTar, Mrs. Burleigh E. Jr., 2736 E. 15th St.
DeTar, Mrs. Burleigh E. Sr., Timber Lane, Duquesne
Ferguson, Mrs. Lewis H., 3102 Minnesota St.
Ferguson, Mrs. Ralph L., 420 E. 33rd St.
Graves, Mrs. F. Burton, 2923 Schifferdecker St.
Grubb, Mrs. Paul H., 607 Washington St., Galena, Kan.
Hamilton, Mrs. Eugene H., 615 N. Pearl St.
Holtzman, Mrs. Samuel, 108 Sergeant St.

Hornback, Mrs. Edward R., 2609 E. 12th St.
Hurst, Mrs. W. W., 2502 E. 12th St.
Isbell, Mrs. C. H., 1046 S. Garrison St., Carthage
Jeans, Mrs. Virgil, 629 Islington Place
Kenney, Mrs. V. E., 728 Chestnut St.
Kirschman, Mrs. Robert E., Route 4, Box 359
Koehler, Mrs. John W., 3010 Wall St.
Longenecker, Mrs. Joe L., 701 N. Jackson St.
McIntyre, Mrs. Emery, 1803 S. Maple St., Carthage
McNew, Mrs. W. T., 1204 S. Main St., Carthage
McPike, Mrs. Lloyd H., 3317 Oak Ridge Drive
Maddox, Mrs. John D., 1330 Crest Drive
Myers, Mrs. Roy H., 623 Sergeant St.
Paddock, Mrs. Chas, S., Mayflower Apartments
Papp, Mrs. Sandor D., 3343 Pearl St.
Patterson, Mrs. Donald R., Holly Hill St.
Patterson, Mrs. Grover S., 1944 S. Main St., Carthage
Post, Mrs. Winfred L., 2630 E. 15th St.
Reid, Mrs. Charles T., 614 Hampton Place
Schoeberl, Mrs. C. B., 3111 E. 4th St.
Schulte, Mrs. Gregory A., 2515 E. 12th St.
Scorse, Mrs. Sidney W., 619 W. 2nd St.
Smith, Mrs. Roland T., 426 N. Pearl St.
Smith, Mrs. Russell W., 315 Euclid St., Carthage
Stormont, Mrs. R. W., 28 S. Webb St., Webb City
Walker, Mrs. Paul W., 1022 N. Sergeant St.
Wetzel, Mrs. Fred S., 1503 S. Garrison St. Carthage
Wieman, Mrs. Harry K., 536 N. Wall St.
Wood, Mrs. George H., 530 E. Highland St., Carthage
Wooldridge, Mrs. Bart F., 1435 Crestwood St.
Wright, Mrs. George W., 222 S. Webb St., Webb City
Young, Mrs. Clyde C., 2518 Markwardt St.

## JEFFERSON COUNTY

Albee, Mrs. Roger, Crystal City
Bolgar, Mrs. Bertalan, Festus
Donnell, Mrs. Harold, DeSoto
Donnell, Mrs. Hart, Crystal City
Donnell, Mrs. Thomas, DeSoto
Fallett, Mrs. Charles, DeSoto
Judge, Mrs. Thomas, Crystal City
Kozal, Mrs. Frank, Crystal City
McKinstry, Mrs. Karl, DeSoto
Mayfield, Mrs. Logan, Crystal City
Rutledge, Mrs. John, Crystal City

## JOHNSON COUNTY

(Warrensburg)

Cooper, Mrs. R. Lee, 411 W. Gay St.
Damron, Mrs. Oscar H., 612 N. Maguire St.
Folkner, Mrs. Albert L., 316 Hillcrest Drive
Gonzalez, Mrs. Mario Garza, 508 Jefferson St.
Harkness, Mrs. Harry H., Burkarth Road
Johnson, Mrs. Charles S., 821 S. Maguire St.
Jones, Mrs. Keith D., 910 Clark St.
Lederer, Mrs. Charles M., 617 Clark St.
Maxson, Mrs. T. Reed, Arilen Acres

## LAFAYETTE-RAY COUNTIES

Best, Mrs. Robert, Higginsville
Boydston, Mrs. Wayne, Odessa
Brady, Mrs. Hugh, Concordia
Brasher, Mrs. Ben H., Lexington
Cook, Mrs. Edna, Richmond
Cook, Mrs. Thomas, Richmond
Cope, Mrs. Joseph S., Lexington
Crozier, Mrs. Frank A., Richmond
Devault, Mrs. George, Richmond
Fulkerson, Mrs. Wilbur E., Higginsville
Johnston, Mrs. E. L., Concordia
Kelling, Mrs. Douglas, Waverly
Kelling, Mrs. George, Waverly
Kelling, Mrs. Jordan, Waverly
Koppenbrink, Mrs. W. E. Jr., Higginsville
Koppenbrink, Mrs. W. E. Sr., Higginsville
Liston, Mrs. Odus, Oak Grove
McFadden, Mrs. Gene, Waverly
Martin, Mrs. Wilfred E., Odessa
Riley, Mrs. Charles T., Richmond
Riley, Mrs. Ralph, Lexington
Ward, Mrs. Joe W., 1004 Frances St., Lexington
Williams, Mrs. John, Oak Grove

## MARION COUNTY

(Hannibal)

Bach, Mrs. Lysle, 1737 Harrison Hill
Burns, Mrs. Francis R., 2903 Hill St.
Canella, Mrs. John, 3254 St. Marys Ave.
Fischer, Mrs. Thomas J., 8 Orlando Drive
Foreman, Mrs. Philip B., 3342 West Ely Road
Glascock, Mrs. Donald, Palmyra
Greene, Mrs. Harry L., 1911 Harrison Hill
Hamlin, Mrs. W. H., 3405 St. Marys Ave.
Landau, Mrs. D. B., 2901 Pleasant St.
Lanning, Mrs. R. J., 7 Cardiff Drive
Latimer, Mrs. Walter, 3302 Marsh Ave.
Lucke, Mrs. E. M., 4000 McMasters St.
Purcell, Mrs. Paul, Hull, Ill.
Rapp, Mrs. Earl, 19 Holliday St.
Roller, Mrs. H. J., 1000 Country Club Drive
Smith, Mrs. W. J., 3101 St. Marys Ave.
Steele, Mrs. James, 1106 Hill St.
Strong, Mrs. R. M., 313 Virginia St.
Sultzman, Mrs. F. E., 1 Cardiff Lane
Sweets, Mrs. Henry Jr., 207 N. Sixth St.
Walterscheid, Mrs. J. H., 12 Riverpoint Road
Well, Mrs. J. W., Palmyra

## MEMBERS-AT-LARGE

Barnett, Mrs. Charles H., 123 E. Locust St., Bolivar
Berry, Mrs. Paul T., Troy
Blackwell, Mrs. Charles W., 1700 S. Fourth St., Platte City
Bloom, Mrs. W. A., 200 Howard St., Fayette
Brenner, Mrs. Paul A., 108 W. Washington St., Owensville
Campbell, Mrs. James Edwin, 623 Sunset Drive, Macon
Carrington, Mrs. Howard W., 105 Bennett St., Lebanon
Cohrs, Mrs. Clarence C., 2 Flower Lane Ter., Moberly
Comeau, Mrs. Richard, Dexter
Crider, Mrs. A. J., Dixon
Crider, Mrs. Russell J., 1875 S. River Road, St. Charles
Davis, Mrs. Landis Y., Canton
Davis, Mrs. Wilbur L., Charleston
Denny, Mrs. Hubert M., 610 State St., Union
Dreyer, Mrs. Philip V., Hunstville
Eggleston, Mrs. Donald E., 410 N. Rutherford St., Macon
Fleming, Mrs. Jacob W. Jr., 1 Windsor Place, Moberly
Fleming, Mrs. Thomas S., 517 Fort St., Moberly
Garrison, Mrs. T. W., Box 548, Camdenton
Grim, Mrs. Edward M., 42 Kellwood Drive, Kirksville
Heeb, Mrs. Max, 800 Allen Blvd., Sikeston
Huber, Mrs. Lasley E., 107 Brinkerhoff St., Moberly
Isom, Mrs. Waldo B., Knox City
Koon, Mrs. Ben, Bolivar
Leech, Mrs. Maurice P., 920 W. Davis St., Fayette
Lichty, Mrs. Charles A., Shelbina
Long, Mrs. David S., Lake Lotawana M40, Lee's Summit
McNeel, Mrs. Lee A. Jr., Valley View Angus Farms, Greenfield
Muench, Mrs. Ludwig O., 1530 Riverview Drive, Washington
Netherton, Mrs. George F., 312 E. Third St., Cameron
Neubeiser, Mrs. Ben L., 2520 Charwood St., St. Charles
Parker, Mrs. H. Graham, Platte City
Post, Mrs. John P., Grand Ave., Washington
Powers, Mrs. John A., 315 N. Pine St., Harrison, Arkansas
Reeder, Mrs. Charles C., New Madrid
Richardson, Mrs. George A., Union
Richardson, Mrs. William R., W. Springfield Road, Union
Roberson, Mrs. John H., Box 270, Lilbourn
Rowlette, Mrs. Avery P., 4 Fair Oaks, Moberly
Schmidt, Mrs. Herbert H., Box 18, Marthasville
Shaw, Mrs. Carvel T., 1008 Washington St., Hermann
Shaw, Mrs. William J. Jr., Lucky St., Fayette
Smith, Mrs. William J., 206 Phelps St., Windsor
Strehlman, Mrs. Benjamin G., 510 W. End Ave., Union
Stricker, Mrs. Emil A., 501 Evergreen St., St. James
Summers, Mrs. Jacob H., Knight Bldg., Lebanon
Underwood, Mrs. Millard K., Rolla
Urban, Mrs. Edgar D., Sikeston
Waltrip, Mrs. Roy T., 931 Hawthorne Drive, Sikeston
Wimp, Mrs. J. J., 1315 S. First St., Kirksville

## MILLER-MORGAN-MONITEAU COUNTIES

Buehler, Mrs. Carl T. Jr., Eldon
Burke, Mrs. J. P., California
Fulks, Mrs. Richard B., California
Gallagher, Mrs. Lionel M., California
Gunn, Mrs. Jack, Versailles
Kibbs, Mrs. E. A., California
Latham, Mrs. Kenyon, California
Lyle, Mrs. Ray, Versailles
Shelton, Mrs. E. O., Eldon
Washburn, Mrs. J. L., Versailles

## MINERAL AREA

(St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve Counties)

Appleberry, Mrs. Charles H., 706 W. Main St., Flat River
Appleberry, Mrs. Rueben, 815 W. Columbia St., Farmington
Brennen, Mrs. John A., 2 Hoctor Drive, Farmington
Bull, Mrs. Ben, 109 S. Knob St., Ironton
Carleton, Mrs. Charles E., 501 Center St., Farmington
Chastain, Mrs. C. W., Route 3, Farmington
Cresswell, Mrs. George F., Potosi
Crouch, Mrs. Richard F., 714 Ste. Genevieve St., Farmington
Dennis, Mrs. Paul, 709 Tyler St., Flat River
Evans, Mrs. Albert L., 113 Benham St., Bonne Terre
Foster, Mrs. Jack L., Desloge
Grossman, Mrs. Marvin, 500 Marshall St., Fredericktown
Haw, Mrs. Marvin T., 207 Fite St., Bonne Terre
Huckstep, Mrs. Robert A., 1313 S. Washington St., Farmington
Hunt, Mrs. John W. Jr., 110 Bell St., Leadwood
Karraker, Mrs. Alvan G., 507 North St., Farmington
Mullen, Mrs. Jack, Route 2, Bonne Terre
Oliver, Mrs. George A., 117 Oak Hill Downs, Farmington
Taylor, Mrs. Van W., 54 Church St., Bonne Terre
Watkins, Mrs. G. L., 813 Dewey St., Farmington
Watkins, Mrs. George Linn, 812 Dewey St., Farmington

## NODAWAY-HOLT-ATCHISON-GENTRY-WORTH COUNTIES

Bare, Mrs. E. F., Tarkio
Bauman, Mrs. Henry C., 921 W. Third St., Maryville
Byland, Mrs. B. F., RFD, Maryville
Carlin, Mrs. Albert, Stanberry
Carpenter, Mrs. Wallace, Rockport
Cossins, Mrs. C. E., State Hospital No. 2, St. Joseph
Dunshee, Mrs. Robert E., 145 Sunset Drive, Maryville
Niedermeyer, Mrs. Ed, Tarkio
Wempe, Mrs. G. R., 930 W. Second St., Maryville

### OZARK AREA
(Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald Counties)

Anderson Mrs. Paul B., Rt. 3, Neosho
Bailey, Mrs. Alan, Missouri State Sanatorium, Mount Vernon
Blankenship, Mrs. George W., Rt. 3, Box 449, Neosho
Bowman, Mrs. M. C., Highway 71, South, Neosho
Brasher, Mrs. Charles A., Missouri State Sanatorium, Mount Vernon
Brown, Mrs. Frederick B., 321 W. College, Aurora
Carter, Mrs. James R., 718 Oakridge Drive, Neosho
Donley, Mrs. Robert R., 617 W. Cleveland St., Monett
Edwards, Mrs. Francis L., 510 Grand Ave., Monett
Glass, Mrs. William J., 402 Grand Ave., Monett
Glover, Mrs. Kenneth, 801 S. Market St., Mount Vernon
Hamilton, Mrs. William P., Aurora
Hobbs, Mrs. George H., Hoberg Road, Mount Vernon
Kenney, Mrs. Roy Evans, Rt. 4, Neosho
Kerr, Mrs. Frank T., 511 W. Cleveland St., Monett
Langeluttig, Mrs. H. V., 529 Kirby St., Mount Vernon
Lentz, Mrs. H. C., 605 Highland Place, Neosho
McCallum, Mrs. A. J. C., 404 Lincoln St., Aurora
Maples, Mrs. F. H., Springfield
Olive, Mrs. George C., R. R. 3, Neosho
Price, Mrs. Charles H., R. R. 1, Cassville
Taylor, Mrs. L. T., Highway 71, South, Neosho
Whitehead, Mrs. Frank F., Box 270, Neosho
Wommack, Mrs. Fred L., Crane
Yates, Mrs. J. Lewis, Missouri State Sanatorium, Mount Vernon

### PERRY COUNTY
(Perryville)

Blaylock, Mrs. G. A., 308 W. Ste. Maries St.
Carron, Mrs. Oscar A., 208 N. Waters St.
DeGenova, Mrs. G. H., 1280 Ridgeway Drive, Ste. Genevieve
Fairchild, Mrs. Jas. F., 36 S. Moulton St.
Feltz, Mrs. L. W., 20 S. Feltz St.
Fischer, Mrs. Theodore, Altenberg
Legner, Mrs. Stanley, 201 State St.
Lutkewitte, Mrs. Jos. F., 33 St. Jude Drive, Ste. Genevieve
McDermott, Mrs. A. E., 619 Bruce St.
Utterman, Mrs. Wm. F., 614 S. Main St.

### PETTIS COUNTY
(Sedalia)

Beckmeyer, Mrs. W. A., 719 W. 4th St.
Bess, Mrs. William E., 1600 W. 10th St.
Bishop, Mrs. William T., 616 W. 6th St.
Boger, Mrs. John W., 2803 Skyline Drive
Brady, Mrs. Charles H., 720 W. 5th St.
Campbell, Mrs. Albert J., 1500 W. 16th St.
Campbell, Mrs. Albert J. Sr., 319 E. Broadway
Dyer, Mrs. D. P., 2511 Stephenson Ave.
Edwards, Mrs. David R., 1619 S. Moniteau St.
Fisher, Mrs. Stanley D., 2200 S. Kentucky St.
Gonser, Mrs. Karl B., 1619 W. Broadway
Hite, Mrs. H. A., Greenridge
Hopkins, Mrs. G. G., 524 S. Grand St.
Hopkins, Mrs. Thomas J., 1506 W. Broadway
Lamy, Mrs. John E., 509 W. Broadway
Lemire, Mrs. Robert W., 1814 W. 11th St.
Long, Mrs. Frank B., 723 W. 7th St.
Love, Mrs. J. G., 612 S. Kentucky St.
Lowe, Mrs. Alvin L., R. R. 4
Mitchell, Mrs. John E., Broadway Arms Apartments
Osborne, Mrs. Charles D., 710 W. Broadway
Proctor, Mrs. Donald C., 908 W. Broadway
Roberts, Mrs. Paul A., 101 E. Marshall St., Sweet Springs
Shy, Mrs. Milton P., 1023 W. 7th St.
Siegel, Mrs. Carl D., 810 S. Barrett St.
Snavely, Mrs. E. C., 908 S. Grand St.
Stauffacher, Mrs. Gordon C., 1313 W. Broadway
Stewart, Mrs. Robert H., 201 Driftwood St.
Trader, Miss Frances W., 219 W. 7th St.
Walters, Mrs. A. L., 1000 W. 7th St.
Worley, Mrs. C. A., 102 W. Ray St., Sweet Springs

### ST. LOUIS CITY
(St. Louis)

Allen, Mrs. Henry Cline, 655 N. Forest Ave. 19
Allen, Mrs. Hollis N., 681 N. Forest Ave. 19
Alvis, Mrs. Bennett Y., 7011 Washington Ave. 30
Arneson, Mrs. Axel N., 6314 Waterman Ave. 30
Austin, Mrs. Martin G., 119 Summit Ave. 19
Backer, Mrs. Matt. H. Jr., 9423 Deves Drive 26
Barden, Mrs. Frank W., 41 Beaver Drive 41
Bartlett, Mrs. Robert W., 6459 Wydown Blvd. 5
Bartlett, Mrs. Willard Jr., 6345 Ellenwood St. 5
Bartlett, Mrs. Willard Sr., 53 Westmoreland Place 8
Bartnick, Mrs. Mitchell L., 3895 Holly Hills 16
Bassett, Mrs. Robert B., 2 Beverly Place 12
Becke, Mrs. William G., 18 Lorenzo Lane 24
Beckette, Mrs. Edmund S., 7475 York Drive 5
Bell, Mrs. Robert M., 35 Glen Road 19
Benjamin, Mrs. Durand, 7340 Navarre Circle 23
Berg, Mrs. Leonard, 7375 Westmoreland Ave. 30
Berland, Mrs. Harry I., 29 Granada Way 24
Bilsky, Mrs. Nathan, 7840 Lafon Place 30
Bindbeutel, Mrs. Arthur H., 3953 Holly Hills 16
Boedeker, Mrs. Roy V., 2909 Bellerive Drive 21
Boemer, Mrs. Lilburn C., 49 Clermont Lane 24
Bohrer, Mrs. Harry C., 4112 Flora Place 10
Bosse, Mrs. Edwin H. Sr., 6906 Washington Ave. 30
Bowdern, Mrs. Edward H., 2 Berkshire St. 17
Boyd, Mrs. Arthur M., 6556 Delor Ave. 9
Bradley, Mrs. Frank R., 7404 Oxford Drive 5
Bradley, Mrs. John Martin, 245 N. Union Blvd. 8
Brennan, Mrs. Robert Alexis, 6030 Highfield Road 9
Brodeur, Mrs. Armand E., 141 Horseshoe Drive 22
Broun, Mrs. Goronwy Owen, 5290 Waterman Ave. 8
Broun, Mrs. Goronwy Owen Jr., 6359 Waterman Ave. 30
Brown, Mrs. Clyde O., 7419 York Drive 5
Brown, Mrs. E. Eugene, 379 N. Taylor Ave. 8
Brown, Mrs. James Barrett, 4 N. Kingshighway Blvd. 8
Brown, Mrs. Seymour, 2 Ricardo Lane 24
Budd, Mrs. John J. Jr., 6144 McPherson Ave. 12
Burns, Mrs. Francis J., 6500 Ellenwood Ave. 5
Burroughs, Mrs. W. H., 7327 Pershing Ave. 30
Burst, Mrs. Donald O., 61 Trent Drive 24
Byrne, Mrs. John Edward, 5878 Delor St. 9
Calkins, Mrs. Delevan, 1515 Schulte Road 41
Cameron, Mrs. Solon, 43 Washington Ter. 12
Cannon, Mrs. Edward M., 20 Briarcliff Road 24
Cannon, Mrs. William J., 43 Clermont Lane 24
Cappel, Mrs. Powell B., 27 Old Westbury Lane 19
Carney, Mrs. Joseph E., 6625 Penrod Ave. 9
Carroll, Mrs. George A., 7831 Delmar Blvd. 30
Carroll, Mrs. Grayson L., 13 Kingsbury Place 12
Chamness, Mrs. James T., 3 Town & Country Drive 24
Cherre, Mrs. Charles J., 10 Haddington Court 5
Ciapciak, Mrs. Stanley J., 30 Log Cabin Drive 24
Clark, Mrs. Clarence L., 95 Pebblebrook Lane 41
Collodi, Mrs. George A., 30 Southcote Road 17
Conrad, Mrs. Adolph H. Jr., 9 Dromara Road 24
Conrad, Mrs. Marshall B., 8542 Colonial Lane 24
Cook, Mrs. Ralph L., 44 Nolan Drive 22
Cooper, Mrs. Thomas J., 30 Beverly Drive 32
Correnti, Mrs. Nicholas A., 6617 Itaska St., 9
Costa, Mrs. Dominic V., 10 Devondale Lane 31
Crossman, Mrs. Robert W., 1509 Holly Drive 19
Daake, Mrs. John W., 48 Portland Place 8
Dalton, Mrs. Arthur R., Conway & Mason Road 41
Diehr, Mrs. Alvin H., 29 Rio Vista 24
DiLeo, Mrs. Senatro W., 667 Langton Drive 5
Donahoe, Mrs. James L., 7336 Princeton St. 30
Doubek, Mrs. John Charles, High Ridge
Doyle, Mrs. Charles R., 28 Kingsbury Blvd. 12
Drake, Mrs. Truman G., 6344 Alexander Drive 5
Drews, Mrs. Leslie C., 43 Hillvale Drive 5
Dreyer, Mrs. Carl Joseph, 45 Glen Road 19
Dripps, Mrs. Roy C., 5210 Jamieson St. 9
Eades, Mrs. Dee W., 6 Kingsbury Place 12
Edwards, Mrs. Joseph C., 610 Polo Drive 5
Eigel, Mrs. Edwin G., 3654 Flora Place 10
Ernst, Mrs. Edwin C., 2 Schultz Road 22
Farrell, Mrs. Robert J., 6906 Roberts Ave. 30
Farley, Mrs. William W., 2 Spoede Acres 41
Feller, Mrs. Harold H., 5834 Bermuda Road 21
Finn, Mrs. Murray Eugene, 4904 Pershing Place 8
Fish, Mrs. Virgil O., 2500 Town & Country Lane 31
Fitzgerald, Mrs. Leo P., 7219 Cornell Ave. 30
Flotte, Mrs. Bernard H., 6 Lila Lane, Florissant
Flotte, Mrs. Sylvester A., 9113 Glen Garden 36
Ford, Mrs. Lee T. Jr., 45 Green Acres 37
Franklin, Mrs. Max S., 7536 Buckingham Drive 5
Fries, Mrs. Armand D., 11 West Geyer Lane 31
Fries, Mrs. John W., 106 Frontenac Forest 31
Gantner, Mrs. George E. Jr., 6641 Pershing Ave. 30
Gettinger, Mrs. Andrew J., 8689 Oriole St. 15
Gissy, Mrs. Carl J., 9999 Litzsinger Road 24
Glaser, Mrs. Martin J., 3550 Hawthorne Blvd. 4
Glick, Mrs. Harry N., Mason Road, Route 13 22
Goldman, Mrs. Melvin L., 8650 Barby Lane 24
Gomez, Mrs. Cesar A. Jr., 18 Havenview St. 41
Green, Mrs. William Radford, 610 Forest Court 5
Greiner, Mrs. Theodore, 7507 Washington Ave. 30
Grogan, Mrs. Frank M., 4166 Flora Place 10
Grueb, Mrs. Paul M., 6 Grantview Lane 23
Gum, Mrs. William R., 706 Bellerive Blvd. 11
Gundlach, Mrs. Arthur, 8 Alden Lane 41
Gunn, Mrs. Walter T., 6742 Itaska St. 9

Haeberle, Mrs. Frederick S., 3206 Hebert St. 7
Hagebusch, Mrs. Omar E., 16 Covington Lane 32
Hall, Mrs. Preston C., 4243 Lafayette St. 10
Hall, Mrs. Robert A., 43 Washington Ter. 12
Hammond, Mrs. John J., 7245 Maryland Ave. 30
Hampton, Mrs. Stanley F., 93 Lake Forest 17
Hardesty, Mrs. John F., 7506 Byron Place 5
Harkins, Mrs. Wm. B., 7 Kingsbury Place 12
Harell, Mrs. Alex, 6628 Neosho St. 9
Harris, Mrs. Charles W., 78 Greendale Drive 21
Harris, Mrs. Solon P., 7138 Maryland Ave. 30
Harrison, Mrs. Lee B., 44 Ridgemoor Drive 5
Hartnett, Mrs. Leo J., 34 Ridgetop Drive 17
Hassett, Mrs. Henry A., 4440 Lindell Blvd. 8
Hawk, Mrs. Bray O., 3534 Longfellow Blvd. 4
Haynes, Mrs. Pugh Jr., 8006 Gannon St. 30
Helbing, Mrs. Harry H., 5475 Cabanne Ave. 12
Henderlite, Mrs. John W., 3 S. Tealbrook Drive 41
Henschel, Mrs. Eugene V., 5815 Eichelberger St. 9
Hilbert, Mrs. Paul H., 5701 Penrod St. 9
Hogan, Mrs. Patrick C., 8935 Westhaven Court 26
Hollo, Mrs. Vencel W., 5925 Lindell Blvd. 12
Holtz, Mrs. Alan S., 320 Oakley Lane 22
Hotz, Mrs. John W., 141 N. Gay St. 5
Huck, Mrs. Richard F., 15 St. Alfred Road 32
James, Mrs. Norman A., 9926 Parkway Drive 37
Jarvis, Mrs. Garth L., 6315 Waterman Ave. 30
Javaux, Mrs. Everett J., 7820 Delmar Blvd. 30
Jensen, Mrs. Joshua E., 3 Brazilian Court 24
Jones, Mrs. Otey S. Sherman, 2010 Longfellow Blvd. 4
Jones, Mrs. Richard A., 332 Calvert St. 19
Jones, Mrs. Vincent L., 123 N. Forsyth Blvd. 5
Karl, Mrs. Michael M., 14 Thorndell Drive 17
Kelley, Mrs. Robert W., 5371 Waterman Ave. 12
Kendig, Mrs. John H., 1609 Thrush Ter. 17
Kessler, Mrs. Edward H., 8721 Halls Ferry Road 15
King, Mrs. Samuel J., 7206 Dale Ave. 17
Kirchner, Mrs. Walter G., 183 3rd Ave., Chula Vista, Calif.
Klaff, Mrs. Daniel D., 919 S. Meramec St. 5
Klein, Mrs. Harry A., 2 Sunset Drive 41
Klippel, Mrs. Bernhardt W., 52 Fair Oaks 24
Kluegel, Mrs. William A., 2845 Gravois Ave. 18
Klym, Mrs. Nicholas, 1506 Doris Drive 38
Kneal, Mrs. Ellsworth, 725 S. Skinker Blvd. 5
Knight, Mrs. Franklin P., 11465 Fairlane Drive 36
Knight, Mrs. William A. Jr., 12 Briarcliff Drive 24
Koetter, Mrs. A. F., 6208 Rosebury Drive 5
Koon, Mrs. Bernard T., 2623 Gurney Court 10
Kountz, Mrs. William B., 2619 Gurney Court 10
Koutsoumpas, Mrs. William V., 3024 Hawthorne Blvd. 4
Kowert, Mrs. Edward H., 662 Elwood St. 19
Kramolowsky, Mrs. Helmuth H., 546 Sheffield Ave. 19
Kuebrich, Mrs. Thomas C., 8361 Pepperidge St. 34
Ladd, Mrs. Charles B., 1237 Visitation Drive 25
Langsdorf, Mrs. Herbert S., 3681 Alberta Ave. 16
Lansche, Mrs. Elmer A., 8358 Racquet Drive 21
Lawton, Mrs. Thomas P., 410 N. Newstead Ave. 8
Leavy, Mrs. Charles A., 9058 Monmouth Drive 17
Lembeck, Mrs. Joseph A., 4103 Flora Place 10
Lerwick, Mrs. Everett R., 40 Portland Place 8
Lieb, Mrs. Francis X., 19 Ridgemoor St. 5
Lohr, Mrs. Curtis H., 601 S. Brentwood Blvd. 5
Lonsway, Mrs. Maurice J. Jr., 7574 Buckingham Drive 5
Lottes, Mrs. J. Otto, 1028 Winwood Drive 24
Lucido, Mrs. Joseph L., 6 Bellerive Acres 21
McMahon, Mrs. Alphonse, 5 Covington Meadows 32
Macdonald, Mrs. John W., 4525 Lindell Blvd. 8
Macnish, Mrs. James M., 229 Bompart St. 19
Machek, Mrs. Atakar, 16 Carrswold St. 5
Martin, Mrs. Raymond T., 3468 Longfellow Blvd. 4
Mathae, Mrs. George H., 3167 S. Grand Blvd. 18
Max, Mrs. Paul F., 12 Dromara Road 24
Mehan, Mrs. Donald J., 6522 Walsh St. 9
Meisenbach, Mrs. A. Edward, 5475 Cabanne Ave. 12
Mendosa, Mrs. Lawrence E., 2126 Blendon Place 17
Merenda, Mrs. Sam J., 45 Berry Road Park 22
Merklin, Mrs. Anton L., 5926 Crane Circle 9
Mestres, Mrs. Hugh M., 657 Lockwood Court 19
Meyer, Mrs. Curtis A., 6534 Walsh St. 9
Meyerhardt, Mrs. Milton H., 36 Lake Forest 17
Mier, Mrs. Thomas M., 516 Overhill Drive 30
Montgomery, Mrs. Austin F., 8623 Eualie Ave. 17
Morfit, Mrs. John C., 7627 Wydown Blvd. 5
Moskop, Mrs. Peter G., 3736 Dunnica Ave. 16
Mowrey, Mrs. William O., 7071 Lindell Blvd. 30
Muckerman, Mrs. Richard I. C., 63 Lake Forest 17
Mueller, Mrs. Robert, 683 W. Lockwood Ave. 19
Mueller, Mrs. Wilbur K., 1160 McKnight Road 17
Muether, Mrs. Raymond O., 19 Country Life Acres 31
Murphy, Mrs. James Patrick, 27 Berkshire St. 17
Neilson, Mrs. Arthur W., 6349 Alexander Drive 5
Nemec, Mrs. Stanley S., 2870 S. Lindbergh Blvd. 31
Nester, Mrs. Charles A., 3921 Federer Place 16
Neun, Mrs. William F., 5862 Delor St. 9
Nolan, Mrs. Charles J., 18 Bellerive Acres 21
Northrup, Mrs. Glenn R., 7371 Princeton Ave. 30
Nye, Mrs. Robert S., 4910 S. Broadway 11
Nye, Mrs. William R., 4852 S. Broadway 11
Obermeyer, Mrs. Charles G., 3957 Holly Hills 16
O'Malley, Mrs. Eugene J., 4402 McPherson Ave. 8
O'Neal, Mrs. Lawrence W., 1 Nassau Drive 24
Oppenheimer, Mrs. Henry E., 10 Enfield Road 32
Orenstein, Mrs. Joseph M., 417 Jackson Ave. 30
O'Sullivan, Mrs. George A., 6181 Lindell Blvd. 12
Palazzo, Mrs. Frank A., 6903 Kingsbury Ave. 30
Parashak, Mrs. Paul M., 7344 Whitehaven Drive 23
Parsons, Mrs. Ernest H., 410 N. Newstead Ave. 8
Peden, Mrs. Joseph C. Jr., 51 Fair Oaks 24
Peeler, Mrs. James O., 10000 Knoll Crest Court 36
Pernoud, Mrs. Flavius G. Jr., 841 Audubon Drive 5
Pernoud, Mrs. Micheal F., 51 Frontenac St. 31
Plag, Mrs. Albert F., 3150 Morganford Road 16
Powers, Mrs. Pierce W., 4 Crestwood St. 5
Presnell, Mrs. Cleitus Albert, 15 York Drive 17
Pulliam, Mrs. Madison J., 7524 Cromwell St. 5
Pyne, Mrs. Herbert S., 5329 Mardel St. 9
Rainey, Mrs. Robert, 319 N. Taylor Ave. 8
Ramsey, Mrs. Robert H., 10 Lake Pembroke Drive 35
Reich, Mrs. Harry A., 6230 Devonshire St. 9
Reilly, Mrs. Leo J., 6219 McPherson Ave. 30
Rendelman, Mrs. George F., 532 Midvale St. 30
Repetto, Mrs. Albert M., 6359 Murdock St. 9
Reuter, Mrs. Louis A., 2 Kingsbury Place 12
Reismeyer, Mrs. L. T., 2612 S. Grand Blvd. 18
Riley, Mrs. William H., 6213 Mardel St. 9
Riordan, Mrs. Laurence M., 410 N. Newstead Ave. 8
Ritter, Mrs. Hubert A., 6546 Walsh St. 9
Rohlfing, Mrs. Walter A., 3838 Federer Place 16
Roy, Mrs. Joseph A., 9412 Acosta Drive 37
Royce, Mrs. Robert K., 410 W. Swan Ave. 19
Ruddell, Mrs. George W., 1333 Highmont St. 35
Ryan, Mrs. Robert E., 1 West Point Lane 31
Sanders, Mrs. Robert D., 4212 Flora Place 10
Sante, Mrs. LeRoy, 308 Orchard St. 19
Schaper, Mrs. Ernest M., 2434 Bremerton Road 17
Schaerer, Mrs. Jacques P., 11 Schultz Road 22
Scheer, Mrs. George E., 52 Berkshire St. 17
Schmidt, Mrs. Edwin H., 10240 Schuessler Road 28
Schmiemeier, Mrs. H. A., 6217 Delor St. 9
Schmiemeier, Mrs. Roy H., 10220 Schuessler Road 28
Sciortino, Mrs. Gaspare, 1019 Laval St. 32
Scott, Mrs. Elwin Powers, 12718 Post Oak Road 31
Sexton, Mrs. Daniel L., 14 Crestwood St. 5
Sexton, Mrs. Elmer E., 2537 Town & Country Lane 31
Shaner, Mrs. John F., 25 Bellerive Acres 21
Sherwin, Mrs. Charles F., Lonedell
Sherwin, Mrs. Charles S., 3971 Flora Place 10
Simon, Mrs. Jerome I., 12 Westridge Court 24
Smith, Mrs. Arthur A., 9423 Acosta Drive 37
Smith, Mrs. Benjamin F., 104 Aberdeen Place 5
Smith, Mrs. Garland F., 1115 Hampton Park Drive 17
Smith, Mrs. Herbert P., 9245 Sappington Road 26
Smith, Mrs. Hugh R., 8836 Rock Forest Drive 23
Smolik, Mrs. Edmund A., 59 Middlesex Drive 17
Spoeneman, Mrs. Walter H., 18 Biritz Court 37
Stanze, Mrs. F. J., 3924 S. Grand Ave. 18
Stephens, Mrs. LeRoy J., 218 Sylvester St. 19
Stindel, Mrs. Charles E., 341 Violet Lane 19
Stone, Mrs. Charles A., 111 Calverton Road 35
Strominger, Mrs. Donald B., 701 Yale Ave. 30
Stroud, Mrs. C. Malone, 6232 McPherson Ave. 30
Stryker, Mrs. William I., 9 Elm Ave. 22
Sudholt, Mrs. Alfred F. Jr., Rt. 1, Box 110 41

Sullivan, Mrs. Clement J., 6371 Waterman Ave. 30
Sweet, Mrs. Herbert C., 3 St. James Court 19
Thale, Mrs. Thomas, 3673 DeTonty St. 10
Thompson, Mrs. J. William, 92 Lake Forest 17
Thompson, Mrs. David A., 8015 Delmar Blvd. 30
Thurmann, Mrs. Manfred, 4309 Germania St. 16
Thym, Mrs. Henry P., 6 Ridgetop Drive 17
Tjoflat, Mrs. Oliver E., 252 Woodbourne St. 5
Tremain, Mrs. Irl G., 4254 Flora Place 10
Twedell, Mrs. Donald L., 5341 Bermuda Road 21
Uhlemeyer, Mrs. Henry A. Sr., 1324 Stein Road 35
Vandover, Mrs. John T., 3 Grantwood Lane 23
Vest, Mrs. James C., 309 N. Sappington Road 22
Virant, Mrs. John A., 119 S. Spoede Road 41
Vitt, Mrs. Alvin E., 113 Frontenac Forest 31
Vogler, Mrs. Alfred T., 5021 Queens Ave. 15
Vohs, Mrs. Carl P., 7407 Cromwell Drive 5
Von Kaenel, Mrs. Joseph E., 551 Barnes Road 24
Wacker, Mrs. Leo L., 9115 Clydesdale Drive 26
Wagenbach, Mrs. Wm. F., 7348 Grandbury St. 23
Walker, Mrs. Francis S., 47 Middlesex Drive 17
Walters, Mrs. Harold E., 9 Huntleigh Woods 22
Wattenberg, Mrs. Carl A., 49 Kingsbury Place 12
Wegner, Mrs. Carl R., 7401 Wellington St. 30
Weinel, Mrs. Francis G., 333 Oakwood St. 19
Weinsberg, Mrs. Wm. C., 6220 Helm St. 9
Weir, Mrs. Don C., 625 Sherwood Drive 19
Welsh, Mrs. Laurence C., 103 W. Old Watson Road 19
Wennerman, Mrs. Sam F., 501 Warren 30
Werner, Mrs. Wm. A., 6015 Childress Ave. 9
Wiegand, Mrs. Herbert C., 40 Overhills Drive 24
Wilcox, Mrs. Claude V., 7022 Tholozan St. 9
Williams, Mrs. Kirkley R., 717 Radcliffe St. 30
Wilson, Mrs. Keith S., 9 Crestwood Drive 5
Winter, Mrs. William O., 1030 Yale Ave. 17
Wirthlin, Mrs. Edward H., 4709 Vienna St. 9
Witt, Mrs. Clyde H., 11 Deer Creek Woods 24
Wood, Mrs. V. Visscher, 6368 Washington Ave. 30
Wotawa, Mrs. William J., 3804 Wilmington St. 16
Young, Mrs. Leo P., 5046 S. Grand Ave. 11
Zeitler, Mrs. William T., 152 Timbercrest Road 22
Zink, Mrs. Oscar C., 9 The Orchards 32

### ST. LOUIS COUNTY

Alex, Mrs. Morris, 18 Crosswinds, St. Louis 32
Bagby, Mrs. J. W., 7 Country Life Acres, St. Louis 31
Bailey, Mrs. William Harold, 9157 E. Milton St., Overland 14
Bauer, Mrs. Robert A., 11 Harneywold Drive, St. Louis 36
Bergmann, Mrs. John F., 818 Risdon Drive, Ferguson 35
Berndsen, Mrs. Gerard H., 12933 Topping Estates, Town & Country
Bernstein, Mrs. Aaron M., 7033 Cornell Ave., University City 30
Bernstorff, Mrs. Paul H., 16 Biritz Court, St. Louis 37
Berwald, Mrs. Irvin I., 747 Old Bonhomme Road, University City 30
Boles, Mrs. C. Read, 9307 Old Bonhomme Road, St. Louis 32
Bolinske, Mrs. Robert E., 16 Chaminade St., St. Louis 41
Briscoe, Mrs. John R., 10053 Briarwood, Ladue 24
Brother, Mrs. George M., 15 Frederick Lane, Glendale 22
Brown, Mrs. Eugene R., 7433 Gannon Ave., University City 30
Brown, Mrs. W. Sidney, 556 Bedford Ave., University City 30
Cacioppo, Mrs. J. E., 1809 New Jamestown Road, St. Louis 38
Calman, Mrs. Carl H., 987 Warder Ave., University City 30
Canepa, Mrs. John B., 3417 Longfellow Blvd., St. Louis 4
Carlson, Mrs. Arne E., 89 Pebblebrook Lane, Creve Coeur 41
Catanzaro, Mrs. R. E., 24 Foxboro Road, Ladue 24
Chinsky, Mrs. Murray, 7200 Colgate Ave., University City 30
Coates, Mrs. Thomas, 39 Clermont Lane, St. Louis 24
Coldwater, Mrs. Kenneth, 1520 Ridgewood Drive, St. Louis 26
Costrino, Mrs. John J., 922 Jeanerette Drive, University City 30
Costrino, Mrs. Joseph A., Route 1, Box 419, Conway Road, St. Louis 41
Cowdry, Mrs. Edmund V., 30 Crestwood Drive, Clayton 5
Davidson, Mrs. Morris, 128 Frontenac Forest, St. Louis 31
Davis, Mrs. Edgar W., 49 Woodcrest Drive, Ladue 24
Denny, Mrs. Robert B., 7827 Delmar Blvd., University City 30
Deyton, Mrs. John W., 659 Fairview Ave., Webster Groves 19
Diehr, Mrs. Maurice A., 28 Dromara Road, Ladue 24
Dill, Mrs. Foster A., 1551 Bellevue Ave., Richmond Heights 17
Doisy, Mrs. Robert A., 103 Edwin Ave., Glendale 22
Dowd, Mrs. James F., 30 Brentmoor Park, Clayton 5
Drescher, Mrs. Emmett B., 619 Haverford Road, St. Louis 22
Duane, Mrs. George W., 9105 Sioux Drive, Affton 23
Dyer, Mrs. Clyde P., Route 2, Box 360, Carmel, California
Eidelman, Mrs. Jack R., 8001 Watkins Drive, Clayton 5
Eller, Mrs. C. Howe, 1408 Fawnvalley Drive, St. Louis 31
Ellis, Mrs. Calvin C., 11627 Fallbrook Drive, St. Louis 31
Ellison, Mrs. Leroy E., 7346 Myrtle Ave., Maplewood 17
Emerson, Mrs. Reynolds L., 618 S. Rock Hill Road, Webster Groves 19
Estes, Mrs. Jack M., 57 S. Dellwood Ave., St. Louis 35
Eversoll, Mrs. Norton, 6356 Clayton Road, St. Louis 17
Fairshter, Mrs. Alex E., 9 Blackpool Lane, Olivette 32
Ferrara, Mrs. John P., 31 Bellerive Acres, Normandy 21
Finkel, Mrs. Barney W., 7210 S. Bristol Drive, Normandy 21
Finley, Mrs. F. L., 2475 Hartland Ave., Overland 14
Fletes, Mrs. James W., 5601 Lindell Blvd., St. Louis 12
Flynn, Mrs. Thomas T., 429 Forest Green Blvd., Webster Groves 19
Forsman, Mrs. Waldo W., 4128 Lindbergh Blvd., St. Louis 27
Freiheit, Mrs. Harold J., 17 Ladue Manor, Ladue 24
Froelich, Mrs. Edwin J., 7321 Overbrook Drive, St. Louis 21
Fuchs, Mrs. George J., 1 Fawnridge Court, Creve Coeur 41
Gaines, Mrs. Quentin M., 136 W. Mermod Place, Kirkwood 22
Gall, Mrs. Ira G., 333 Tanglewood, Ladue 24
Gitt, Mrs. Joseph J., 1025 S. Warson Road, Ladue 24
Goodman, Mrs. Nathanial, 9 Scarsdale Lane, Richmond Heights 17
Goodrich, Mrs. Harold A., 52 S. Rock Hill Road, Webster Groves 19
Gray, Mrs. Walter C., 14 St. Alfred Road, St. Louis 32
Grundmann, Mrs. William H., 6948 Delmar Blvd., University City 30
Hale, Mrs. T. H., 301 N. Forsyth Blvd., Clayton 5
Hall, Mrs. Eugene W., 4300 Roland St., Normandy 21
Halpern, Mrs. Lawrence K., 6304 Fauquier Drive, Clayton 5
Hampton, Mrs. Oscar P., 8153 Stanford Court, University City 30
Hamtil, Mrs. Edward W., 4321 Bonfils Drive, Bridgeton
Harrison, Mrs. Stanley L., 16 Devondale Lane, St. Louis 31
Hayward, Mrs. John D., 221 S. Clay Ave., Kirkwood 22
Helbing, Mrs. Edward J., 698 Greenview Drive, Glendale 22
Hobbs, Mrs. John E., 25 Woodcrest Drive, St. Louis 24
Hogancamp, Mrs. C. E., 1911 N. Signal Hill St., Kirkwood 22
Holscher, Mrs. Edward C., 234 W. Jackson Road, Webster Groves 19
Hoppe, Mrs. Robert C., 5934 Robert Ave., St. Louis 9
Howe, Mrs. A. L., 601 S. Brentwood Blvd., Clayton 5
Howe, Mrs. Louis F., 1136 Ridgelyn Drive, St. Louis 24
Huck, Mrs. Frank F., Smizer Mill Road, Fenton
Hughes, Mrs. Robert G., 41 Chaminade St., Creve Coeur 41
Irick, Mrs. Carl C., 227 E. Lockwood Ave., Webster Groves 19
Izmirlian, Mrs. Grant, 525 Fairview Ave., Webster Groves 19
Jacobs, Mrs. Frederick, 7308 Winchester Drive, Normandy 21
Kaskie, Mrs. Clifford R., 30 Berkshire St., St. Louis 17
Kendis, Mrs. Joseph B., 19 Warson Ter., Clayton 24
Kilker, Mrs. Clarence H., 7231 Winchester Drive, Normandy 21
Kimelman, Mrs. Nathan, 21 Granada Way, St. Louis 24
King, Mrs. E. E., 2915 Bellerive Drive, Normandy 21
Kingsland, Mrs. Robert C., 12 Oak Ter., Webster Groves 19
Kloecker, Mrs. H. J., 56 Fair Oaks, Ladue 24
Kloeppel, Mrs. Carl F., Route 2, Box 563, Fenton
Knock, Mrs. Henry L., 33 Algonquin Wood, Glendale 22
Koch, Mrs. Robert E., 10036 Conway Road, St. Louis 24
Kopp, Mrs. Jules H., 7679 Carswold Drive, Clayton 5
Krieger, Mrs. John Louis, 28 Berry Road Park, St. Louis 22
Kurth, Mrs. Robert K., Route 1, Branch Road, Fenton
Lansche, Mrs. W. Edward, 809 Rampart Drive, St. Louis 22
Lerner, Mrs. A. F., 7545 Parkdale Ave., Clayton 5
Leslie, Mrs. C. H., 1313 N. Harrison Ave., Kirkwood 22
Lord, Mrs. Richard, 325 Park Ave., Glendale 22
Luke, Mrs. Herbert, 675 Hargrove Lane, Florissant
Lund, Mrs. Herluf G., 26 York Drive, Brentwood 17
McCall, Mrs. Edwin L., 519 Wilcox St., Kirkwood 22
McLean, Mrs. Royal C., 520 West Jewel St., Kirkwood 22
McNalley, Mrs. Frank P., 8019 Watkins Drive, Clayton 5
Magidson, Mrs. Joseph S., 615 Forest Court, Clayton 5
Magness, Mrs. Guy N., 7727 Blackberry Lane, University City 30
Marcus, Mrs. M. D., 8227 Balson Ave., University City 32
Mayer, Mrs. Robert A., 7509 Wayne Ave., University City 30
Meador, Mrs. James R., 9 Bellerive Acres, Normandy 21
Meagher, Mrs. Arthur J., 1 Ballas Court, St. Louis 31
Mezera, Mrs. Raymond A., 7135 Forsyth Blvd., St. Louis 5
Miles, Mrs. Paul W., 15 Ridgecreek St., St. Louis 41

Miller, Mrs. Charles Jr., 206 N. Fillmore St., Kirkwood 22
Molden, Mrs. Charles A., 36 Bellerive Acres, Normandy 21
Moore, Mrs. Harry G., 17 Westmoreland Place, St. Louis 8
Moore, Mrs. William E., 7277 N. Roland Blvd., Normandy 21
Mueller, Mrs. Robert J., 40 Huntleigh Woods, St. Louis 31
Nakada, Mrs. James R., 2 Huntleigh Downs, Frontenac 31
Nelson, Mrs. J. Roger, 529 Pamela Lane, Kirkwood 22
O'Connell, Mrs. John J., 1937 O'Connell Ave., Overland 14
O'Keefe, Mrs. Joseph D., 324 S. Elm St., Webster Groves 19
Ottensmeyer, Mrs. Charles D., 2035 Goodale St., Overland 14
Parker, Mrs. Brent M., 277 Edwin St., Glendale 22
Pawol, Mrs. Sylvester E., 11701 Old St. Charles Road, Bridgeton
Peebles, Mrs. J. B. Jr., 548 N. Clay Ave., Kirkwood 22
Pennoyer, Mrs. James, 117 Plant Ave., Webster Groves 19
Peugnet, Mrs. Hubert B., 8104 Roxburgh Drive, Clayton 5
Phillips, Mrs. Hanford, 215 Graybridge Road, Clayton 24
Rachlin, Mrs. Maxwell, 42 Rio Vista, Ladue 24
Rao, Mrs. Carlo, 1110 Indian Circle Drive, St. Louis 41
Reiches, Mrs. Aaron J., 11 Brazilian Court, St. Louis 24
Reilly, Mrs. Pierce J., 825 S. Hanley Road, Clayton 5
Reinhard, Mrs. Edward H., 235 Sylvester Ave., Webster Groves 19
Rennard, Mrs. Marvin, 7507 Buckingham Court, Clayton 5
Roberts, Mrs. Harold K., 434 S. Hanley Road, Clayton 5
Robertson, Mrs. Frank G., 642 N. Forest St., Webster Groves 19
Roblee, Mrs. Melvin A., 5 Kingston Manor, Ladue 24
Rogers, Mrs. John A., 7720 Delmar Blvd., University City 30
Rolufs, Mrs. Lloyd S., 320 Frienda St., Kirkwood 22
Rosenberg, Mrs. Henry E., 2130 S. Warson Road, Ladue 24
Schattyn, Mrs. J. Martyn, 9 Huntleigh Downs, Kirkwood 22
Schluer, Mrs. P., 9 Long Meadows Lane, St. Louis 31
Schopp, Mrs. Alvin C., 8128 Glen Echo Drive, Normandy 21
Schwartz, Mrs. Melvin M., 7486 University Drive, University City 30
Seabold, Mrs. John A., 408 Mission Court, University City 30
Shepherd, Mrs. Charles T., 10 Covington Meadows, Clayton 32
Simril, Mrs. Wayne A., 423 Polo Drive, Clayton 5
Sisk, Mrs. James C., 146 Frontenac Forest, St. Louis 31
Speno, Mrs. Angelo, 1071 Raritan St., St. Louis 19
Spitzer, Mrs. Ernest, 6637 Kingsbury Blvd., University City 30
Staehle, Mrs. Melvin E., 7325 Ravinia Drive, Normandy 21
Steiner, Mrs. A. J., 8009 Gannon Ave., University City 30
Sterling, Mrs. C. E., 3055 Lindbergh Blvd., St. Ann
Strauchen, Mrs. G. William, 47 W. Old Watson Road, Webster Groves 19
Steubner, Mrs. Roland W., 18 Dromara Road, Ladue 24
Sutter, Mrs. Richard A., 7215 Greenway Ave., University City 30
Tashma, Mrs. Sigmund, 5847 Pershing Ave., St. Louis 12
Teiber, Mrs. Fred W., 38 Fair Oaks, Ladue 24
Thiele, Mrs. Belmont R., 10201 Thornwood Drive, Ladue 24
Thiele, Mrs. Otto, 2702 El Camino St., St. Charles
Tobias, Mrs. Norman, 700 S. Meramec St., Clayton 5
Townsend, Mrs. Vincent F., 7532 Byron Place, Clayton 5
Tremain, Mrs. E. E., 2901 Big Bend Road, Maplewood 17
Trueblood, Mrs. Alva C. Jr., 326 Fairway Lane, Kirkwood 22
Valach, Mrs. Frank J., 4 Nassau Circle, Creve Coeur 41
Vatterott, Mrs. Paul B., 55 Chaminade Drive, Creve Coeur 41
Vinyard, Mrs. Paul, 315 Church St., Ferguson 35
Vollmar, Mrs. C. J., 9756 Old Warson Road, St. Louis 24
Wall, Mrs. Albert, 5322 Helen Ave., Jennings 20
Walther, Mrs. Roy A. Sr., 2438 Woodson Road, Overland 14
Walther, Mrs. Roy A. Jr., 7 High Acres, St. Louis 32
Walton, Mrs. J. H., 6202 Nottingham St., St. Louis 9
Weber, Mrs. Sol, 8360 Delmar Ave., University City 30
Weber, Mrs. William K., 4323 Gladwyn St., Bridgeton
Weinhaus, Mrs. Robert S., 868 Albey Lane, University City 32
Weitman, Mrs. Maximilian, 204 Lancaster St., Clayton 5
Westrup, Mrs. Arthur W., 8540 Big Bend Road, Webster Groves 19
Westrup, Mrs. Ellsworth A., 14 N. Taylor Woods, Kirkwood 22
Whitener, Mrs. Paul R., 3291 Carlow Place, St. Ann
Wiedershine, Mrs. L. J., 10239 Thornwood St., Ladue 24
Williamson, Mrs. O. E., 16 Goodwin Lane, Ladue 24
Wittler, Mrs. Harry A., 2817 Manderly Drive, Brentwood 17
Wood, Mrs. James A., 6914 Kingsbury Place, University City 30
Wulff, Mrs. George J., 6 Graybridge Lane, Ladue 24
Yanow, Mrs. Mitchell, 7396 Bedford Ave., University City 30
Young, Mrs. J. S., Apt. 6L, 40 N. Kingshighway Blvd., St. Louis 8

### SALINE COUNTY
### (Marshall)

Aiken, Mrs. Richard F., 110 North Brunswick St.
Blalock, Mrs. Robert W., 1380 S. Salt Pond St.
Bowdish, Mrs. Palmer R., 604 E. Yerby St.
Haynes, Mrs. Robert C., 754 E. Eastwood St.
Knipschild, Mrs. Bedford F., 505 N. Brunswick St.
Lawrence, Mrs. John R., Arrow Rock
McBurney, Mrs. C. Alex, 927 Hurt St., Slater
McCorkle, Mrs. E. Lee, 791 E. Eastwood St.
Reid, Mrs. James A., 102 E. Rea St.
Roehrs, Mrs. Marvin E., 756 E. Eastwood St.
Simmons, Mrs. S. P., 934 S. Lafayette St.

### SOUTH CENTRAL
### (Howell-Oregon-Texas-Wright-Douglas-Ozark Counties)

Burns, Mrs. Tom, Houston
Callihan, Mrs. C. F., 803 Grace Ave., West Plains
Coffee, Mrs. A. L., Willow Springs
Connor, Mrs. Sam, Mountain Grove
Cooper, Mrs. C. W., Thayer
Denney, Mrs. R. W., Mountain Grove
Fowler, Mrs. M. L., 1302 W. 3rd St., West Plains
Hogg, Mrs. Garrett, Cabool
Miller, Mrs. Harold, Willow Springs
Smith, Mrs. Rollin H., 620 W. Main St., West Plains
Spears, Mrs. Joe L., Cabool
Tiffany, Mrs. D. E., Mountain View
Walker, Mrs. A. T., Thayer
Wall, Mrs. Joe, Houston
Walton, Mrs. M. C., Mountain View
Wiles, Mrs. J. N., 1212 W. Broadway, West Plains
Wilson, Mrs. John E., 811 Armstrong St., West Plains

### WEST CENTRAL
### (Bates-Cass-Cedar-St. Clair-Vernon Counties)

Barger, Mrs. O. B., Harrisonville
Barone, Mrs. Paul L., State Hospital No. 3, Nevada
Baska, Mrs. Robert E., Butler
Giesler, Mrs. Donald H., Osceola
Hartwell, Mrs. Basil O., Drexel
Jones, Mrs. Edward S., 301 Price St., Harrisonville
Lusk, Mrs. Charles A. Jr., 311 N. Delaware St., Butler
Luter, Mrs. Carter W., 506 N. Havaba St., Butler
McCann, Mrs. Louis P., 920 W. Cherry St., Nevada
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## Curiosa et Trivia

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---

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---

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## Capsule Clinics

- A very low blood urea nitrogen may be a good prognostic sign in that it indicates good diuresis and good kidney function. Gallagher, J. C., and Seligson, D., New England J. M. **266**:492, 1962.
- Oxygen given routinely to the mother in the last 15 minutes or so before labor may be a most effective means of preventing fetal birth injury. Prystowsky, H., Postgrad. Med. **31**:284, 1962.
- The ototoxic effects of kanamycin in two patients consisted of degenerative changes in the organ of Corti. These lesions were identical to those produced in cats and in guinea pigs. Benitez, J. T. et al., Arch. Otolaryngol. **75**:192, 1962.
- Occult loss of blood in the feces occurred in 61 per cent of 421 patients receiving aspirin. With long-continued use of aspirin the loss can lead to severe iron-deficiency anemia. Stubbe, L. et al., British M. J. **1**:675, 1962.

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From Clinical Clippings, the Francis Roberts Agency, Inc.

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# WASHINGTON

Or should medical practice versus government control be limited to Washington! Washington is losing newspaper space to Saskatchewan, Canada; Vienna, Austria, and for some time Great Britain has been in the news with reports and denials of doctors leaving England and doctors with inferior training being brought in. And in Washington, with the King-Anderson bill still in the House Ways and Means Committee, at least five other bills that would influence medical practice have been introduced or tacked on as amendments to bills in the Senate.

With the vote on the Anderson-Javits amendment to the House-passed Welfare bill (H. R. 10606) first scheduled for vote on July 10, and the arguments concerning the amount of debate to be allowed on various bills, it is quite certain that the status quo will not be the same on August 1 as it is at the time that this issue of Missouri Medicine begins its press run.

Early in July, the Council on Legislative Activities of the American Medical Association reported, concerning the Anderson-Javits amendment, "Informed Washington sources report that at this time the vote appears so close that it could go either way."

And "either way" the differences between the Anderson-Javits amendment and the King-Anderson bill may be of interest. Principle differences are:

1. Eligibility is liberalized by covering all individuals over age 65.
2. The services are the same as those proposed in H. R. 4222 except that nursing home facilities are restricted to those affiliated with a hospital; outpatient hospital diagnostic services are restricted; medical services may be rendered by interns and residents in nursing homes and by home health agencies affiliated with a hospital; the drug provision is liberalized by permitting the use of any drug approved by the pharmacy and threapeutic committee of the hospital.
3. In payment for services rendered, administration of certain aspects of the program could be delegated by the Secretary of HEW to an agency such as Blue Cross, and a health insurance carrier could be designated as a dispersing agent for the government.
4. No real change is provided in federal versus state administration.
5. The two and a half to three million persons over 65, not under social security, would receive benefits financed by general revenues.

At a news conference early in July, President Kennedy expressed "strong support" for the Anderson-Javits amendment, calling it "an effective bill" which would mean "a great deal to aged people." Senate Democratic Leader Mike Mansfield declared that it was "a good bi-partisan measure" which would "draw votes from both parties." Senator Clinton P. Anderson, Democrat from New Mexico, pointed out that this is an election year and that "Unless favorable action is taken now, health insurance for the aged is likely to be a major issue in the fall elections."

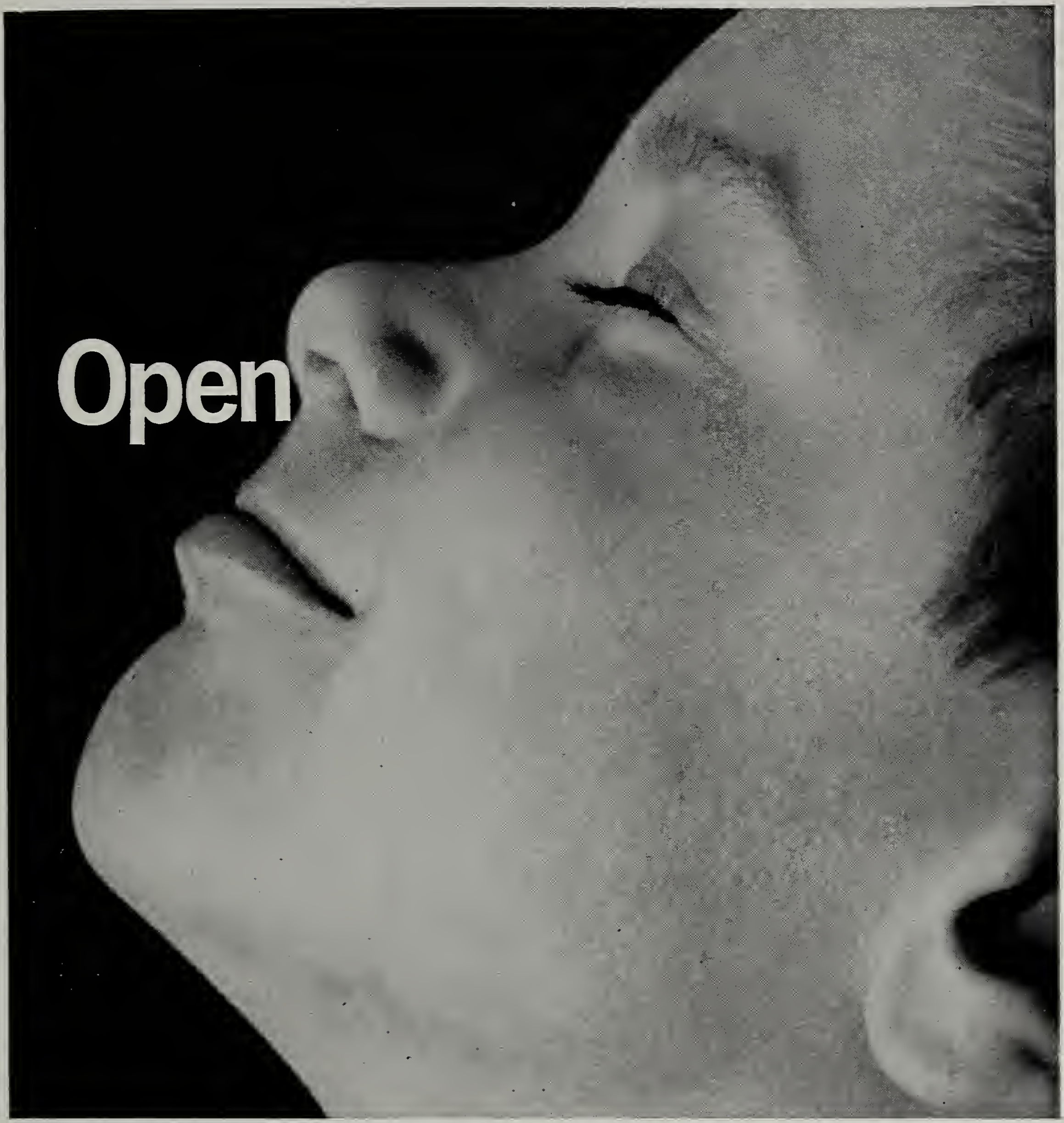
## GOVERNORS' CONFERENCE

At the governors' conference in Hershey, Pa., early in July, a proposal on medical care for the aged through social security was rejected. The rejected medical care resolution hedged on the point of endorsing a social security finance system. However, the governors two years ago voted 30 to 13 for social security financing of medical care of the aged.

## SOCIAL SECURITY'S GROWTH

With President Kennedy's urging that an extra quarter of 1 per cent in the payroll tax and the tax base being raised from $4,800 to $5,200, the maximum tax would be raised to $201.50 next January 1, and to on up to $253.50 by 1968.

When the Social Security tax came into existence in 1937, the amount paid by the employee, and matched by the employer, was 1 per cent on the first $3,000 of pay, or $30. In 1950, this was increased to 1½ per cent, or $45. In 1953 the base pay was raised to $3,600, making the amount paid by employee and employer $54. From then on, in 1954 the tax became 2 per cent, amounting to $72; in 1955 base pay was raised to $4,200, raising the amount paid to $84; in 1957 the tax rate increased to 2¼ per cent, making $94.50; in 1959, the tax rate was raised to 2½ per cent and base pay to $4,800, making the amount $120; in 1960 the tax rate increased to 3 per cent, making the amount $144; in 1962 the tax rate increased to 3⅛ per cent, making the amount $150. The present schedule for 1963 is 3⅝ per cent which will amount to $174. For the self employed person, first covered in 1951, the tax rate is 1½ times the tax on employes.



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Across
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## GOVERNOR'S STUDY COMMITTEE FINDS CONSTITUTIONAL CONVENTION NOT NEEDED

The Constitutional Convention Study Committee, consisting of 23 men and women representing all sections of Missouri, was appointed by Governor Dalton on Dec. 12, 1961. The assignment of the committee, as stated by the Governor, was "to make recommendations to the state upon the advisability of calling into being a Constitutional Convention in 1963."

The present state Constitution requires that there be submitted to the voters of the state at the November 1962 election the question: "Shall there be a convention to revise and amend the Constitution?" If the majority of the votes cast on the question are in the affirmative, the Governor is required to call an election of delegates to the convention.

The committee has made its study and has recommended that: "A Convention to revise and amend the Missouri State Constitution should not be authorized by the voters in November 1962."

Briefly the reasons given by the committee for their recommendation are:

1. There appears to be no strong sentiment in the state at the present time that there need be revision of the Constitution. The Constitution of 1875 was revised in 1942 so is relatively new and basically sound.

2. The expense of a constitutional convention in terms of money, time and effort on the part of both government and individually is not justified.

3. Only New Jersey, Alaska and Hawaii have adopted new constitutions since Missouri adopted the present one in 1945.

4. Any changes that may be needed can be made by amendment to the present document.

5. Although many changes were suggested to the committee, it did not feel that they justified a constitutional convention.

6. Many of the suggestions made to the present committee had been considered by the 1943-44 convention but were not incorporated in the 1945 Constitution.

7. Many of the suggestions presented to the committee could be effected by legislative action under the existing Constitution.

8. Many of the provisions of the present Constitution have not been utilized such as the authorization for the consolidation of counties and the adoption of home rule charters by cities and counties.

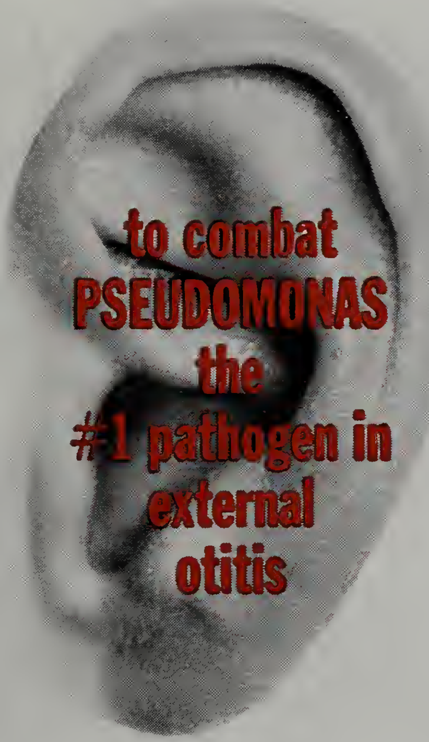
9. All suggested changes in the Constitution could be effected through the amendment process.

10. Missouri's Constitution is easier to amend than the constitutions of most other states. In Missouri, amendments may be submitted to the voters either by the legislature or by the voters through the initiative process. Only 14 of the 50 states allow amendments to be submitted by voters through the initiative process. Missouri is one of only 16 states where it is possible for a simple majority of the elected members of the legislature to submit constitutional amendments.

11. The Missouri record shows that when sufficient demand for changes in the state Constitution has developed, the amendment process has been used. Since the Constitution was adopted in 1945, 19 amendments have been submitted to the voters, 13 of which have been adopted and six have been rejected.

12. The general election in November 1962 need not be the last opportunity the voters have for another 20 years to authorize the calling of a constitutional convention. While the present Constitution requires that the question of holding a constitutional convention be presented to the voters every 20 years, the Constitution also provides that the General Assembly may, by law, submit the question to the voters at any general or special election and the voters themselves could utilize the initiative process to call a convention at any time.

13. The committee felt that there is adequate facility to study and prepare proposed revisions of the Constitution. The committee pointed out many of the facilities, among them the interim study committees of the General Assembly.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# Missouri Academy of General Practice

A luncheon program to bring information on various phases of private medical practice to the seniors of the University of Missouri Medical School was held on May 9 at the Tiger Hotel in Columbia. Forty-two members of the senior class were present. Others were unable to attend because of preceptorship programs and other training requirements.

**Senior medical students attended luncheon and panel.**

This luncheon was sponsored jointly by the Public and Professional Relations Committee of the Missouri Academy of General Practice and the Committee on Rural Medical Service of the Missouri State Medical Association. This is the second year for this joint project. Following lunch Dean Wilson of the Medical School made a few introductory remarks concerning the appreciation of the Medical School for this project and then turned the meeting over to Dr. Edward Campbell, Cape Girardeau, Chairman of the Public and Professional Relations Committee of the Missouri Academy of General Practice, who served as master of ceremonies.

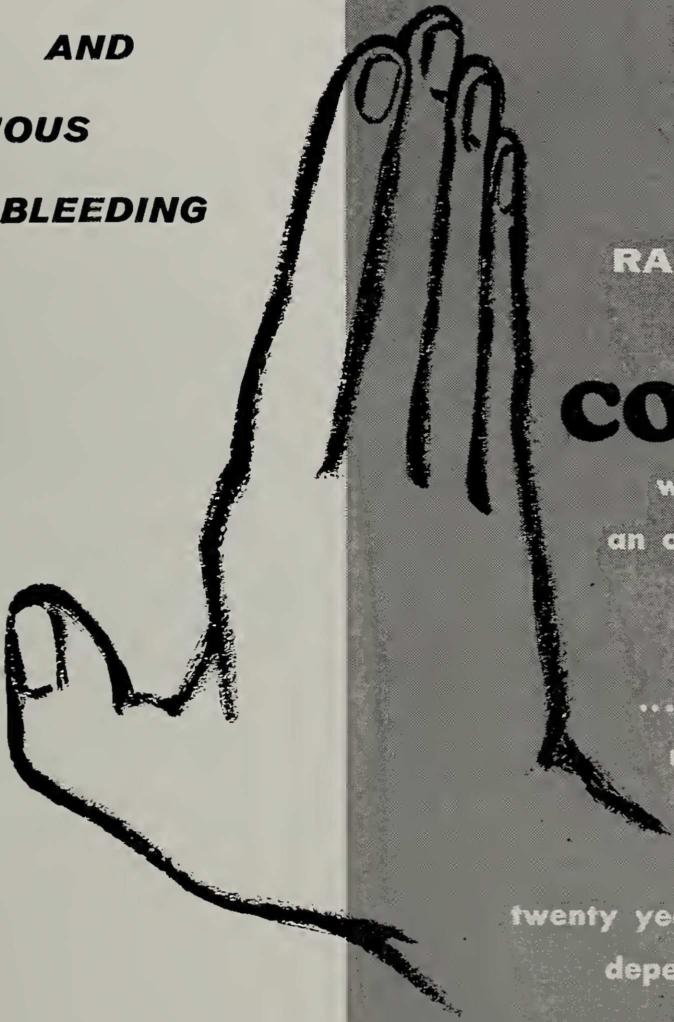
**Program participants included Drs. Spelman, Worley, Wilson and Bass.**

After making a number of introductions, Dr. Campbell presented the first speaker, Dr. B. J. Bass, of Salem, who discussed solo practice. The next speaker was Dr. Charles Worley, Sweet Springs, who spoke on partnership practice. The third speaker was Dr. A. E. Spelman, Smithville, who discussed group practice. All three speakers are members of the Academy and are, or have been, members of the State Medical Association Committee on Rural Medical Service. Following this practical symposium, the Presi-

**Drs. Wilson, Bass and Campbell listen to Dr. Dowell, President of MSMA.**

**President Pearse of MAGP discussed the Academy.**

(Continued on page 818)



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# Woman's Auxiliary

Taking the slow way home from the Chicago A.M.A. Auxiliary Convention—by train—may have drawbacks for some. But for me it was the first time in five days I had time to slip off my shoes and begin to pigeonhole my thoughts.

Mrs. J. Martyn Schattyn

Mrs. Harlan English (Margaret) of Danville, Ill., the retiring president, as gracious and lovely as we all found her in March, managed to make even the business sessions so interesting that the convention body was one of the most attentive on record.

It was with the greatest pride that I had the honor of giving Missouri's oral report during the Sunday afternoon preconvention meeting of presidents and presidents-elect. In two minutes I could not begin to relate all of Jane Wade's accomplishments last year, or do justice to the impetus her personality and enthusiasm gave to every project she tackled. I found myself wishing earnestly that she were with us so that we could profit by her wisdom and level headedness.

During Monday's session an important order of business was the nomination of National Board members and members of the House of Delegates to the seven member nominating committee for 1962-63. Our own Marjorie Peterson, respected and loved throughout the Auxiliary, was chosen one of these seven during the balloting on Tuesday. A further honor which came to Marjorie and to Missouri was her appointment as Regional Chairman on the Program Committee.

Ruth Kelling, another of our much-loved past presidents, kept the Missouri ball rolling by accepting an appointment as Regional Chairman for Civil Defense. We are proud of these two who have made our state so well known in the national organization. But I know they will forgive me when I say that the crowning touch of all for Missouri was the election of Betty Sutter to the National Board as North Central Regional vice-president, an honor for her which we fervently hope will lead to further opportunities for service in National. Betty has been so dedicated and outstanding in every area in which she has served that we are delighted to know that her extraordinary talents have been recognized by the National Auxiliary. Missouri wishes you all success, Betty. Congratulations!

Many excellent speakers during the convention brought the latest information on such diverse subjects as the Student A.M.A. Auxiliary, Medical Quackery, Rural Health, Safety, the A.M.A. Educational and Research Foundation, Health Careers, Legislation, Publicity, Civil Defense and Mental Health. Betty Sutter's intensive work on the Mental Health Committee for the last two years was well reflected in her wonderful presentation before the delegates in the Tuesday afternoon meeting. Whatever she does she does with grace and finish, and I am sure the newly-appointed National Mental Health Chairman will profit greatly by Betty's untiring ground work.

An innovation this year was the inclusion in our busy schedule of two early morning sessions before the business of the day. On Tuesday we heard Dr. Theodore Van Dellen, medical editor of the *Chicago Tribune,* talk on "Guarding Your Husband's Health," a presentation in which we were urged to better understand the special needs of our physician husbands, to help ease the stresses and strains of the daily routine, and to pamper them a little so that their strenuous lives may be longer and happier.

The Honorable Everett Dirksen, Senator from Illinois, was scheduled to be our speaker at 8:30 a.m. Wednesday. Because of urgent legislative events in Washington, he was unable to be with us, and sent his apologies. Disappointed at first, the delegates were then elated to be able to hear Dr. Edward R. Annis of Florida, medicine's eloquent spokesman, who, the very next day, became the A.M.A.'s choice as the new President-elect of A.M.A.

Among the social events we attended was a beautiful tea honoring Mrs. English and the incoming president, Mrs. William G. Thuss of Birmingham, Alabama. Another was the Fortieth Anniversary Luncheon on Tuesday honoring National Past Presidents, National A.M.A. Officers,

*(Continued on page 804)*

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Missouri Medicine

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**ADOLPH ROSTENBERG JR., M.D.,** *Chicago*

# The Skin and Systemic Disease

Skin manifestations in infections, disorders of the nervous system, gastrointestinal tract disturbances and metabolic disorders are discussed.

Dr. Rostenberg is Professor of Dermatology and Head of the Department of Dermatology of the University of Illinois College of Medicine.

The paper was presented at the 104th Annual Session of the Missouri State Medical Association, March 18 to 21, 1962, St. Louis.

ALL PHYSICIANS are aware that the skin participates in systemic disease. Time honored examples are the common exanthemata. For hundreds of years, long before their true nature was realized, physicians diagnosed measles and scarlet fever by looking at the skin. Admittedly, it is not always so easy to arrive at the diagnosis merely by inspection but, nevertheless, the skin can often be a great aid in providing clues to the nature of underlying alterations; and it will be the purpose of this article to review some of the more important cutaneous-visceral associations. Certain conditions have been arbitrarily selected, and no attempt has been made at completeness. For the purpose of organization, the material has been broken down into various artificial units; that is, the skin and infections, the skin and the nervous system, and so forth.

Table 1 lists the association of skin alterations in a few common infections.

TABLE 1
SKIN AND INFECTIONS

| | |
|---|---|
| Exanthemata | Mycoses |
| Typhoid | Meningitis |
| Syphilis | |
| Herpes Zoster | Herpes Simplex |
| Erythema Marginatum | With Rheumatic Fever |
| Stevens-Johnson Syndrome | With Respiratory Infections? |

There are, of course, many other infections in which cutaneous lesions form a part of the total symptom complex, e.g., Haverhill fever, Rocky Mountain spotted fever. The nature of the cutaneous changes is of a somewhat different relationship in the three groups and that is why they have been separated from one another. In the conditions listed at the top of the table, the rash is a direct expression of the infectious agent or some product released by it as the erythrogenic toxin of the streptococcus scarlatina group. The lesions of secondary syphilis are brought about by the direct invasion of the spirochete. With herpes there is a different relationship between the lesions and the underlying infection. Here it might be said, and this is especially true for herpes simplex, that there is a dual relationship.

While the cutaneous lesions are presumably a direct consequence of the invasion by the virus, nevertheless the precipitation of the viral attack may be a reflection of some other associated condition. Recall that a synonym for herpes simplex is fever blisters. Finally, when one comes to the last two conditions, the nature of the relationship with the underlying infection is much more devious. Erythema marginatum has a well established association with rheumatic fever and is thought by many to be an important hallmark for that condition. From the dermatologist's point of view, erythema marginatum (erythema annulare rheumaticum) is one of the multiform erythemas and differs possibly only in trivial morphologic respects from many other members of this group. In general, there are polycyclic erythematous lesions which may not be too obvious, and may have a rather evanescent existence. However, the presence of any rash of this character in a young person in whom the rash cannot be explained on other grounds, e.g., drug ingestion, should be a warning that this person may have rheumatic fever and proper steps should be taken in order to establish the presence of this diagnosis in order to forestall more serious complications.

Table 2 lists some associations between the skin and the nervous system.

TABLE 2

SKIN AND NERVOUS SYSTEM

| | |
|---|---|
| Adenoma Sebaceum | Epiloia |
| Sturge-Weber Syndrome | Encephalotrigeminal Angiomatosis |
| Neurofibromas | Von Recklinghausen |
| Increased Sebaceous Secretion | Encephalitis |
| | Parkinson's Disease |
| Hyperpigmentation? | Pituitary Disease |
| Hypopigmentation? | Pineal Disease |

Adenoma sebaceum are small, more or less flesh colored papules which tend to cluster around the nose, over the sides of the cheeks, and on the forehead. Usually, the upper lip is fairly well spared, which tends to differentiate these lesions from those of epithelioma adenoides cysticum. In addition to the small hemispherical papules and nodules, periungual fibromas and patches of wrinkled infiltrated doughy skin, usually labelled as shagreen skin, may be found. The importance of the adenomas is that they may denote a genetic abnormality that can have a multiplicity of manifestations, including pulmonary, renal and nervous system lesions. Most commonly it expresses itself in the form of tuberous sclerosis plus epileptiform seizures and mental retardation. There is, as is well known, a strong familial tendency.

The Sturge-Weber syndrome consists of an extensive nevus flammeus involving, usually, one side of the face, forehead and the eye on that side. The nevus is merely the cutaneous expression of widespread vascular abnormalities with attendant calcifications. The exact neurologic and/or ophthalmologic lesions that are present naturally depend on the extent and location of the angiomatous involvment.

Neurofibromas are the well recognized cutaneous hallmark of Von Recklinghausen's disease. This condition in its classic form with the multiplicity of sessile and pedunculated tumors of various sizes plus cafe au lait spots is probably the easiest of all the conditions to diagnose. It should, however, be borne in mind that Von Recklinghausen's disease can present itself in peculiar and bizarre forms. One difficult question is, how many cafe au lait spots are required before a diagnosis of Von Recklinghausen's should be made? I do not think there is any explicit numerical answer to this question. I would not frighten a patient with a single cafe au lait spot by telling him that he has Von Recklinghausen's disease unless there was a definite family history of it, but I certainly would suggest that he be watched. Another sign that often is of value in the diagnosis of Von Recklinghausen's disease is axillary freckling. If this exists plus a cafe au lait spot and there is not a multiplicity of freckles elsewhere I would strongly entertain the diagnosis of Von Recklinghausen's disease. Some of the more bizarre manifestations of Von Recklinghausen's disease that may or may not be associated with the more classic manifestations are localized gigantism, particularly in the form of enormous digits.

Local redundancies of tissue that have been variously labelled as pachydermatocele, elephantiasis nervosa, elephantiasis racemosa, in reality are manifestations of Von Recklinghausen's disease. It is my opinion—but I admit further documentation is required—that certain examples of cutis laxa are also expressions of Von Recklinghausen's disease. It should be remembered that Von Recklinghausen's disease may affect any and all tissues. It should also be recalled that the tumors of Von Recklinghausen's disease may become sarcomatous. Von Recklinghausen's is a disease that does not, by and large, stand still; hence, a guarded prognosis should always be given when the diagnosis of Von Recklinghausen's is made, in that, even though the condition may be rather trivial at the time the diagnosis is made, no one can say how widespread it may ultimately become.

Table 3 lists some of the associations of the skin and the gastrointestinal tract.

The Peutz-Jegher's syndrome is a well established association of cutaneous and mucous membrane "freckling" and intestinal polyps. The pigmented spots are usually scattered over the lips

TABLE 3

SKIN AND GASTROINTESTINAL TRACT

| | |
|---|---|
| Peutz-Jegher's | Intestinal Polyposis |
| Malignant Atrophic Papulosis | Intestinal Perforations |
| Osler-Weber-Rendu | Intestinal Hemorrhage |
| Discrete Fatty Atrophy | Pancreatitis |
| Pyoderma Gangraenosum | Ulcerative Colitis |

and adjacent mucous membranes. There may be few to many. The intestinal polyps can become malignant, but there is not a strong tendency for them to do so.

Malignant atrophic papulosis, or Degos' disease, is probably the least well known of the conditions listed; however, it is important to recognize this condition in that in the majority of patients the prognosis is poor, Further, it can often be diagnosed from the skin lesions alone. The skin lesions begin as scattered indolent reddish papules which become umbilicated in the center, yielding a porcelain white appearance there. There may be a fine scale over this portion and occasionally there are telangiectatic vessels at the periphery of the lesion. This is a rather distinct morphologic appearance that is not simulated by any other skin change known to me. From the systemic point of view, the important consideration is that a high percentage of persons with this condition develop intestinal lesions of a similar nature which lead to perforation and often terminate fatally.

The Rendu-Osler-Weber syndrome, as is well known, consists of small telangiectases scattered anywhere over the surface of the body. These have a strong tendency to bleed and epistaxis is one of the commonest of manifestations with this condition. Similar telangiectatic lesions occur throughout the intestinal tract and severe and occasionally fatal hemorrhage may be a consequence. Probably similar vascular lesions can develop in any tissue. Pulmonary arteriovenous fistulae have been reported.

Discrete fatty necrosis associated with a pancreatitis is one of the less well recognized associations; however, it is important in that the skin lesions may lead to the diagnosis of the underlying pancreatic disease. The lesions are rather nondescript, consisting of scattered subcutaneous nodules. These are associated with intermittent attacks of abdominal pain. A biopsy of the skin lesions is said to yield unique histologic alterations. In the fat are seen "ghost-like cells" with thick shadowy walls and no nuclei. These changes presumably develop from the effect of the pancreatic enzyme (lipase) on the subcutaneous fat. The underlying pancreatitis can be acute or chronic.

Pyoderma gangraenosum is a concomitant of underlying disease, especially ulcerative colitis. The lesions may appear rather precipitously as painful ulcerations which can be quite large and may be quite refractory to any therapy. The exact pathogenesis of the cutaneous ulcerations is not known. One theory is that they arise because of a Shwartzman phenomenon.

Table 4 lists some of the associations between the skin and underlying metabolic disorders.

TABLE 4

SKIN AND METABOLIC DISORDERS

| | |
|---|---|
| Xanthomatous Infiltrates | Lipid Metabolic Disorders |
| Necrobiosis Lipoidica Diabeticorum | Diabetes |
| Circumscribed Myxedema | Thyroid Disease |
| Blisters plus Hirsutism | Porphyria |
| Melanotic Pigmentation | Addison's Disease |
| | Diencephalic Disease |

Xanthomatous infiltrates occur in a wide variety of disturbances of lipid metabolism. I will make no attempt to cover these systematically but wish to point out that such deposits can occur in a wide variety of diseases, e.g., many of the reticuloses, diabetes, any variety of hypercholesterolemia and, indeed, can develop in the absence of any detectable alteration in lipid metabolism.

Probably the most common of xanthematous alterations is the one known as xanthelasma. This consists of yellow to brownish to orange plaques located on the eyelids, usually near the inner canthi. The plaques tend to be oval with their long axes parallel to the margins of the lids. These are primarily distressing from the cosmetic point of view, but at times they are harbingers of more serious underlying alterations; as an occasional association of these with disposition to early coronary artery disease has been observed.

Attempts have been made to correlate the underlying lipid alteration with the morphologic variety of the cutaneous xanthoma. While some broad correlations can occasionally be made, no strict reliance can be placed on the appearance of the lesion as denoting the nature of the underlying lipid disturbance. One ominous type of cutaneous xanthoma is that in which the xanthomas develop in the volar creases of the fingers and palms. This is seen in conjunction with a biliary cirrhosis; but it is to be emphasized that this same type of cutaneous lesion can develop in the absence of biliary cirrhosis.

Necrobiosis lipoidica diabeticorum is often a guidepost to an underlying diabetes. The cutaneous lesion consists of glazed plaques usually occurring over the anterior surface of the tibia. The plaque often has a play of colors. Centrally there may be a yellow or orange color with a change towards erythema or dusky red at the periphery. The lesion is asymptomatic. It, as a rule, develops rather insidiously. Its importance is that there is a high association between the presence of such lesions and diabetes. However, again it is to be pointed out that morphologically indistinguishable lesions have developed in the absence of any detectable diabetes.

Localized hemispherical swellings, often with a doughy feeling, which, as a rule, develop over the lower leg, extending to the level of the ankle, may be a circumscribed myxedema. This condition can develop in persons who have or have had hyperthyroidism. Again, it must be pointed out that while this association is a fairly frequent one, this type of skin alteration is seen independently of any thyroid disease. The lesion develops because of a mucinous infiltrate in the corium.

In porphyria cutanea tarda the common skin lesions consist of blisters in exposed areas, usually the backs of the hands and the ears, especially when the person has been exposed to sunlight. These often heal with scars which may have a slight suggestion of a purplish color. There also may be some diffuse pigmentation of the affected parts. In the female there is a tendency for hirsutism to exist.

Disturbances in melanin pigmentation are a well known concomitant of Addison's disease. The hyperpigmentation presumably arises because of the absence of the negative feedback of the adrenal steroids on the pituitary, so that the melanocyte-stimulating hormone of the pituitary is released in greater quantities than normal.

Peculiar pigmentations have been reported in a variety of systemic diseases, and I shall not discuss any of these except to point out that a patient developing any unusual pigmentation without obvious external cause should be investigated as possibly having some more profound underlying disturbance.

Table 5 lists associations between skin alterations and underlying anomalies of the vascular tree.

Some of these have already been commented upon: consequently, I will discuss only the remainder.

Pseudoxanthoma elasticum is probably a widespread genetic anomaly involving the collagen throughout the body. The name for the condition obviously denotes that originally it was thought that it was the yellow elastic tissue that was involved, but electron microscopy studies suggest it is really the collagen. So far as the skin is concerned, the lesions can be restricted to small localized patches or can be fairly diffuse. Common sites for involvement are the axillae and the sides of the neck. The skin in such areas has a slightly yellow to brown appearance, although the color change may be faint.

TABLE 5

SKIN AND VASCULAR TREE

| | |
|---|---|
| Osler-Weber-Rendu | Telangiectases + Angiomas |
| Pseudoxanthoma Elasticum | Abiotrophy of Collagen – Vascular Lesions |
| Sturge-Weber | Angiomas + Calcifications |
| Angiokeratoma Corporis diffusum | Telangiectases, Honeycomb glomeruli |
| Klippel-Trenaunay<br>Parkes-Weber | Arteriovenous Fistula |

There is a puckered appearance to the skin, and it has been aptly likened to the appearance of a "plucked chicken." Associated with the disease are a variety of vascular lesions. One of the best known of the vascular lesions is the angioid streak of the retina. Any vessel can be involved, and if some of the larger arteries are involved more serious difficulties with circulation may develop.

Angiokeratoma corporis diffusum is a disease that was described many years ago and then semi-forgotten but in recent years has had a renaissance of interest. This is a widespread vascular condition which, for some as yet undetermined genetic reason, affects practically only males. The myocardium and the renal glomeruli may also be involved. Hypertension frequently exists. The disease is apparently due to the deposition of a diaminophosphatide in the media of many vessels. In that this underlying change is widespread, there may be a large number of manifestations giving a bizarre over-all picture. The condition is now thought to be a lipoid storage disease and probably would be better classed with metabolic disturbances.

The Klippel-Trenaunay syndrome and the Parkes-Weber syndrome are similar, if not identical, conditions. They develop because of abnormal arteriovenous communications in an extremity and, as a consequence of the disturbance in the circulation, there is usually an enlargement of the affected limb. Arteriovenous fistulae in other areas may also exist and cause complications.

Table 6 lists some cutaneous visceral associations in which the skin alterations are a part and parcel of the total symptom complex.

TABLE 6

SKIN AND MULTIPLE SYSTEM DISEASE—OTHER THAN INFECTIONS

| |
|---|
| Sarcoidosis |
| Progressive Systemic Sclerosis |
| Lupus Erythematosus |
| Dermatomyositis |

Several of these conditions come under what today tends to be labelled as collagen disease. This to me is a somewhat meaningless label but suffices to indicate the widespread nature of the malady. Most of the conditions in table 6 are discussed elsewhere in this article, so that here I shall discuss sarcoidosis only. I shall not go into the vexed problem of etiology except to reiterate my belief that the tubercle bacillus has nothing directly to do with the production of the disease. The important things to remember about the cutaneous lesions of sarcoidosis is that they may assume a diversity of appearances, none of which is pathognomonic.

The most frequent lesion is a split pea-sized flesh colored papule. In the Negro these tend to congregate on the eyelids and the ala nasi. It is also important to remember that the classic lesion of sarcoidosis, namely, the hard or "sarcoid" tubercle is not pathognomonic for sarcoidosis but can be brought about by a variety of etiologic agents, e.g., the tubercle bacillus, the lepra bacillus, beryllium, the spirochete of syphilis and others. As a consequence, it is erroneous to say the diagnosis of sarcoidosis was confirmed by the pathology. The pathologist can only say the biopsy shows a hard tubercle, compatible with the diagnosis of sarcoidosis. On the other hand, the diagnosis of sarcoidosis can be excluded by the pathologic alterations in that probably there is no sarcoidosis without a "sarcoid lesion."

Table 7 lists some of the cutaneous associations with underlying carcinomas.

TABLE 7

SKIN AND CARCINOMAS

| | |
|---|---|
| Acanthosis Nigricans | Scleroderma? |
| Dermatomyositis | Carcinoid Syndrome |
| Erythema Multiforme | Metastases |

These are among the most interesting and important associations of cutaneous changes with visceral disease, for oftentimes the presence of the skin lesion may be the first reason to suspect that a neoplasm exists. One of the best established of such associations is acanthosis nigricans. This consists of the development of a discolored dirty appearing skin area with a slightly velvety or warty texture. The lesions tend to develop in the axillae, the sides of the neck, but can be quite profuse. The presence of such a lesion in an adult is practically pathognomonic for the diagnosis of a carcinoma. If I had such a lesion and the carcinoma could not be found by the usual diagnostic procedures I would submit to a laparotomy. Acanthosis nigricans also develops in childhood. Here the association with carcinoma is much less certain; although recently tumors of the pituitary have been found. A pseudoacanthosis nigricans has also been described. This allegedly is the development of lesions similar to those described, but are somewhat less definite. It is said that this develops in obese persons. The existence of pseudoacanthosis nigricans has been questioned.

Dermatomyositis in the adult is another well established association with carcinoma. In not all cases of adult dermatomyositis has a carcinoma been found; but it is my opinion that the vast majority betoken an underlying carcinoma and the inability to find it is an indication of the imperfections of our diagnostic tools rather than that the tumor does not exist. Dermatomyositis in the child is apparently much less frequently associated with a carcinoma; and hence, while it is a serious condition, it has a much better prognosis insofar as life is concerned. Dermatomyositis is not an easy diagnosis to make. The rash of dermatomyositis can be localized or quite diffuse. Some slightly pathognomonic points are the onset with a considerable amount of edema of the face, especially of the lower eyelids. This can occasionally be so conspicuous that it simulates an acute dermatitis venenata. Classically, there is an efflorescence on the upper eyelids which tends to be heliotrope in color. The recent tests for elevation of various serum transaminases are often helpful in establishing this diagnosis. The cutaneous lesions are similar to those of lupus erythematosus, and indeed a distinction between these two conditions can be exceedingly difficult. Possibly there is some common underlying biochemical alteration which would explain the similarity of the clinical findings. The rash, in addition to being reminiscent of lupus erythematosus, can also have a poikilodermatous appearance. Indeed, some of the early cases were described as poikilodermatomyositis.

Erythema multiforme, or—to use a more general heading—the multiform erythemas constitute a broad group of dermatoses of considerable diagnostic importance and at times of bewildering morphologic diversity. There is no doubt but that the factors underlying the development of the multiform erythemas can be legion, from drug ingestion to infection; but here I shall consider the group only in relationship to an underlying neoplasm. When a multiform erythema develops in association with an underlying neoplasm, the multiform erythema is usually slightly bizarre in appearance and often quite persistent. Hence, it may be said, as a somewhat oversimplified generalization, that any persistent and bizarre multiform erythema should be thought of as denoting an underlying neoplasm. A wide variety of names have been given to morphologic variants of erythema multiforme, but no useful purpose is served by the perpetuation of these.

Scleroderma has been reported in association with underlying neoplasms. It is my opinion, although I do not have adequate documentation for this view, that classical scleroderma, which is preferably labelled progressive systemic sclerosis, is a condition independent of underlying neoplasms, but that scleroderma-like changes do develop in association with underlying carcinomas. I have seen several such cases. It is well to recall that occasionally scleroderma and dermatomyositis have been confused, and indeed cases have been reported under the label sclerodermatomyositis. These are probably examples of the sclerodermoid changes to which I have just referred as developing in association with an underlying carcinoma.

This has been a cursory, somewhat dogmatic review of a few of the more important viscerocutaneous associations. It is hoped, that it will serve to point up the importance and utility of the skin in the diagnosis of systemic disease. It is an ill skin, indeed that does not show some diagnostic clue.

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In Germany, where the idea of national pension plans had its beginning, the plan still flourishes in spite of two world wars that ended in defeats and destruction of currency. At present employers and employees each contribute 7 per cent of gross wage to finance old age pensions. For health insurance an additional 4.8 per cent is paid by both employer and employee. An additional 0.7 per cent goes for sick pay and other allowances.

In England workers covered by welfare programs and their employers pay special taxes, which pay for less than half of welfare costs. In the case of health insurance three out of every four dollars comes from general taxes.

In France an employee contributes about 6 per cent on a maximum pay of less than $2,000, the main expense falling on the employer who pays approximately 30 per cent on their payrolls. Welfare in France begins with maternity grants and ends in death benefits.

In Italy, workers pay approximately 11 per cent of their earnings, while employers' contributions amount to about 50 per cent of payrolls.

Sweden's social security benefits account for 15 per cent of the national income. Welfare expenses cost the employee 20 per cent, the employer 11 per cent and the government 69 per cent.

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# A Practical Program for Cardiac Resuscitation

SUDDEN DEATH may be reversible. Heretofore some patients with reversible sudden death may have died because of the hesitancy of physicians to perform a thoracotomy and open heart massage.

**A procedure for the prompt management of cardiac emergencies is presented, together with a case report illustrating ventricular fibrillation corrected by external cardiac massage and external defibrillation.**

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With the proven effectiveness of external cardiac massage and electrical defibrillation, these patients can be treated without delay or doubt. Beck[1] in 1947 reported a case of open chest defibrillation with complete recovery of the patient. Zoll et al.[2] in 1956 reported the technic of closed chest defibrillation. Keuwenhover et al.[3] in 1960 reported the effectiveness of external cardiac massage in the maintenance of adequate circulation. Now with assisted respiration and external cardiac compression, patients may be maintained until the type of cardiac arrhythmia is established by electrocardiogram and then corrective resuscitation performed.

Our experience with closed cardiac massage and external defibrillation has convinced us of its value. The purpose of this paper is to present what has proven a practical procedure in the management of patients with cardiac arrest with an illustrative report of a successfully treated patient.

## CASE PRESENTATION

This 58 year old housewife first entered the hospital on July 11, 1961, because of a urinary tract infection of several week's duration, with x-ray evidence of a left renal stone. She had been under medical management for symptoms of coronary insufficiency. There was a history of myocardial infarction in 1960.

On physical examination, the patient was moderately obese. Blood pressure was 140/80 and pulse 72 and regular. Grade II arteriosclerotic retinopathy was present. The heart was not enlarged and no murmurs were noted. There was generalized mild abdominal tenderness, with more marked left costovertebral angle tenderness. The remainder of the physical examination was within normal limits.

Laboratory studies—CBC and urinalysis were reported within normal limits. Electrocardiogram showed probable old posterior myocardial infarction with anterior wall myocardial ischemia.

Cystoscopy and retrograde pyelograms, under local anesthesia, demonstrated a left ureteropelvic stone with mild hydronephrosis. The stone was dislodged from the ureteropelvic junction and, following this, the patient had no further urinary symptoms. Because of the patient's heart disease further operative procedures were delayed. The patient was discharged on restricted activity and a weight reduction diet.

She was admitted for the second time on September 25, 1961, for further evaluation and possible left pyelolithotomy. She had lost 20 pounds and symptoms of coronary insufficiency had decreased. An electrocardiogram (fig. 1) showed probable old

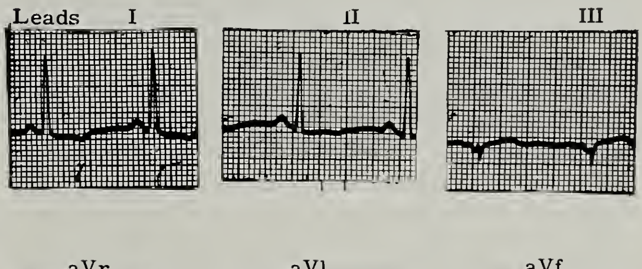

**Fig. 1. Electrocardiogram two days prior to cardiac arrest.**

posterior myocardial infarction with anterior wall ischemia, as on the previous admission.

On September 29, 1961, the patient had an episode of tachycardia, rate 140 per minute, associated with mild chest pain, soon after receiving atropine 0.4 mg. and demerol 75 mg. I.M. The mechanism of this tachycardia was not documented. Thirty minutes later, the patient had a convulsion. No peripheral pulses or auscultatory evidence of cardiac activity could be detected. There was slow irregular respiration. Immediate external cardiac massage was started, a Bennett respirator obtained and a cut-down was established. An electrocardiogram (fig. 2) documented the presence of ventricular fibrillation. The patient received external defibrillation using two shocks of 750 volts 0.15 seconds in duration, in rapid succession. There was immediate restoration of a supraventricular tachycardia with a blood pressure of 120/80. Pronestyl 1.0 grams IV at the rate of 100 mg. every two minutes and 320 mg. of quinidine gluconate I.M. were given at this time. She was then placed on a maintenance dosage of 400 mg. pronestyl and 400 mg. quinidine every six hours. The patient remained comatose for about 45 minutes and during the next 20 hours her mental status cleared to the prefibrillation state.

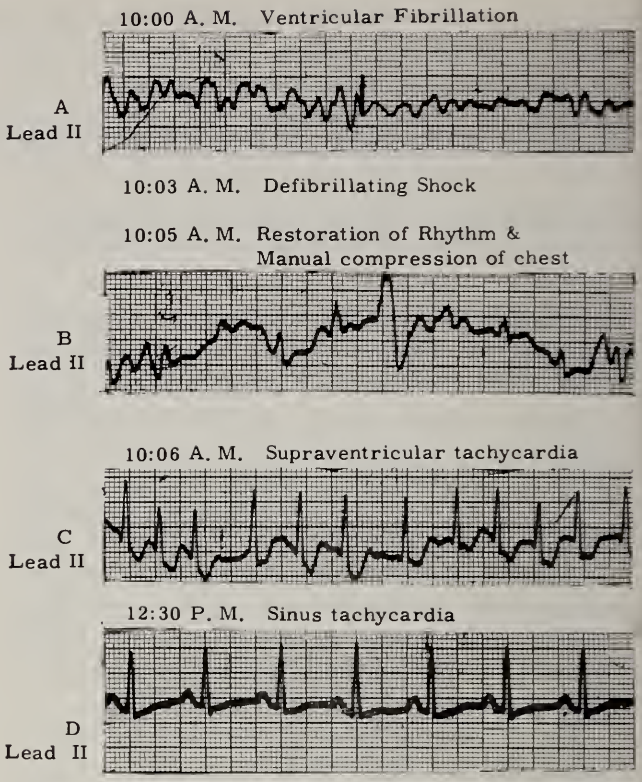
10:00 A. M. Ventricular Fibrillation
A
Lead II
10:03 A. M. Defibrillating Shock
10:05 A. M. Restoration of Rhythm & Manual compression of chest
B
Lead II
10:06 A. M. Supraventricular tachycardia
C
Lead II
12:30 P. M. Sinus tachycardia
D
Lead II

**Fig. 2.** Electrocardiogram during and after cardiac arrest.

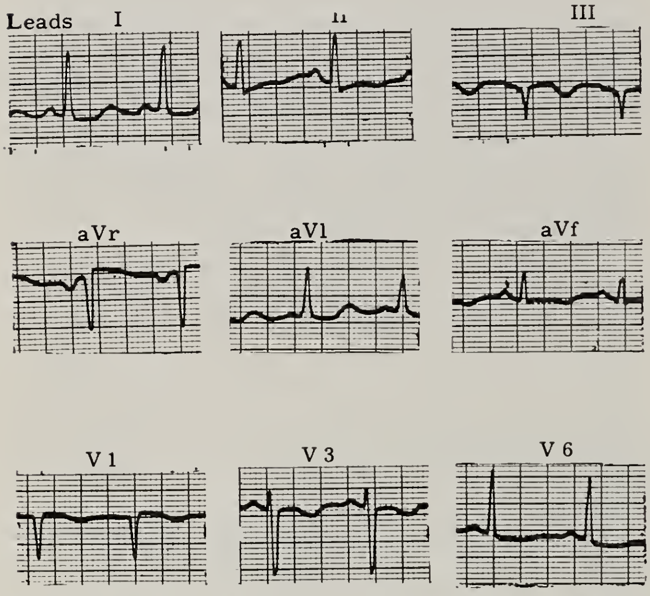

**Fig. 3.** Electrocardiogram seven days after cardiac arrest.

Serum transaminase was recorded as 70 units. The electrocardiogram revealed no evidence of further myocardial damage (fig. 3). There were no further arrhythmias and the remainder of the hospital course was uneventful.

## Discussion

Ventricular fibrillation and cardiac arrest have been recognized as fatal cardiac emergencies for many decades. Lane in 1902, was noted by Hosler[4] as being the first to report successful cardiac resuscitation in the operating room. Stroud and Feil[5] in a review of the terminal electrocardiogram mention that in 1887 McWilliams predicted ventricular fibrillation to be the principal factor in cardiac arrest. Robinson in 1912[5] was given recognition for reporting the first electrocardiograms in the agonal state. In 1915 Allbutt[5] proposed that an overwhelming sudden vagus stimulation may result in complete standstill and sudden death.

Since that time, many authorities have written about the basic cardiac arrhythmia involved in sudden death. Levine has stated that in surgical patients cardiac standstill is the mechanism of arrest in 95 per cent of the cases. Stroud and Feil producing coronary occlusion in dogs for 10 minutes found ventricular fibrillation to occur in approximately 50 per cent of the cases. On review of their 16 clinical cases of coronary artery disease with cardiac arrest, the terminal electrocardiogram showed ventricular fibrillation in 50 per cent and ventricular standstill in 50 per cent of the cases. Beck[6] states that 90 per cent of deaths in coronary artery disease are secondary to ventricular fibrillation. Because of the obvious difficulty in documenting the terminal electrocardiogram, there remains much uncertainty as to the relative frequency of arrhythmias responsible for cardiac arrest. This points up the necessity for documenting each arrhythmia in cardiac arrest by an electrocardiogram before starting therapy.

Zoll et al.[7] cited the many etiologies of ventricular fibrillation and used electric countershock to correct bouts of atrial fibrillation, atrioventricular tachycardia and ventricular fibrillation in experimental animals. Clinically they terminated 11 attacks of ventricular fibrillation in four patients. Recently Alexander[8] reported the correction of ventricular tachycardia by electric countershock which had been resistant to medical therapy. Holswade[9] lists the common causes of cardiac arrest: Anoxia or hypoxia, vagal reflexes, drugs or poisons, multiplicity or overdose of anesthetic agents, hypercapnea or sudden shifts in blood pH, hemorrhagic shock, massive transfusions of citrated blood, direct cardiac stimulation or manipulation, hypothermia, air embolism, coronary occlusion and electrocution.

Internal cardiac massage is a time proven method of cardiac resuscitation. However, it has limited application outside the surgery suite and the emergency room. Time consumed in preparation and in surgery, lack of proper facilities and properly trained personnel limit its further application, not to mention the morbidity and mortality resulting from the thoracotomy itself.

We have found a mobile cart with the equipment and medication practical as listed in table 1. This equipment is relatively inexpensive. Any private hospital could provide this facility for the cost of an external defibrillator, the electrocardiogram already in the hospital and a suitable cart.

TABLE 1

EQUIPMENT ON MOBILE CART

1. **Electrocardiogram**
2. **Defibrillator**
3. **Oxygen supply**
4. **Cut down tray**
5. **Cardiac needle**
6. **Mouth to mouth airway; mask and bag**
7. **Board for placing under patient's back**
8. **Levophed**
9. **Cedilanid**
10. **Pronestyl**
11. **Isuprel**
12. **Calcium gluconate**
13. **Potassium chloride**
14. **Adrenalin**
15. **Hydrocortisone**
16. **Molar sodium lactate**
17. **Quinidine gluconate**

Medical and paramedical personnel have the following instruction: Begin at once—begin external cardiac massage and artificial respiration immediately. Available house staff and the nursing supervisor are alerted and the cardiac resuscitation cart is made available.

A. *Cardiac Massage.*—Leave the patient in bed, place special chest board under patient's back for support, then with the heel of the hand over the zyphoid and the other hand placed on top of the first hand the lower sternum is compressed 1½ to 2 inches (in an adult) 60 times a minute. The effectiveness of massage is determined by palpable peripheral pulses, decrease in pupil size and improvement in color.

B. *Open Airway and Artificial Respiration.*—Use mouth to mouth in adults and mouth to nose in children. Airway equipment with two way mouth to mouth respiration tubes are available on each floor. Do not wait for airway equipment or another person before starting respiration. A suction machine for aspiration of vomitus or secretions should be easily available. A Bennett respirator is called for and an emergency call for an anesthesiologist to assist in maintaining adequate ventilation is then made.

C. When the resuscitation cart arrives, establish the type of arrhythmia by the electrocardiogram. If ventricular fibrillation is present, connect and ground the defibrillator, disconnect the electrocardiogram lead cable. Place one electrode of the defibrillator at the manubrium and the other at the apex, then shock one to two times with appropriate voltage, depending upon the size of the patient. Defibrillation is not usually possible until massage has corrected the myocardial anoxia.

An adequate intravenous infusion should be started immediately. Levophed should be available for treating hypotension. A rapid acting digitalis preparation as Cedilanid may be used after ventricular filbrillation has occurred until cardiac irritability has disappeared. Adrenalin may be injected intracardiac in cases of cardiac

External cardiac massage will maintain adequate circulation. Basinger et al.[10] recorded a blood pressure of 120/80 mm. Hg. by this technic and in one patient they were able to compare the open with the closed technic and obtained better peripheral pulses with the closed technic. They postulated enhanced venous return when the chest was unopened. As previously noted cellular metabolism must be restored by adequate oxygenation before external defibrillation will be effective. Perfusion of the coronary system with oxygenated blood under a minimum pressure of 40 mm. Hg. will sufficiently restore the chemical metabolic energy sources of the myocardium after many minutes of arrest.[4]

The many reports of successful cardiac[11-15] resuscitation in patients with coronary artery disease emphasizes the importance of having a planned cardiac resuscitation program. Scherf and Borneman[16] reported 250 cases of healed myocardial infarction and of these 40.8 per cent died suddenly in the absence of congestive heart failure or a new myocardial infarct and were assumed to have died of a fatal arrhythmia.

Since the introduction of external cardiac massage, reports of complications have occurred. Basinger et al.[17] report their complications in 46 autopsied cases: rib fracture, 15 cases; hemothorax, four cases; hemopericardium, two cases; liver injury, five cases; and marrow emboli in six cases. Morgan[18] reported a case of hepatic rupture in a patient who had received closed chest cardiac massage. These known complications should alert the physician to unexplained symptoms following successful resuscitation.

Woodward[19] reported a worth while procedure to remember in patients having cardiac arrest secondary to blood loss. He elevated the limbs for 15 seconds in order to fill the heart with blood from the limbs by gravity. He confirmed the effectiveness of this procedure with the chest open and stressed two conditions: (1) cardiac arrest must be immediately recognized and, (2) no more than 15 seconds are spent in the maneuver.

We do not advocate cardiac resuscitation for patients dying of hopeless underlying disease. It is thought that a procedure as outlined should be applicable to any hospital and wish to reemphasize the following points.

a. One should make sure of the type of arrhythmia by electrocardiogram or oscilloscope prior to instituting definite therapy in cardiac emergencies.

b. External cardiac massage and assisted respiration should be started immediately.

c. The monitoring of the blood pressure during external massage has not proven practical but the clinical observations of pupil size, skin color and palpation of the femoral pulses have been useful signs in evaluation of the maintenance of adequate circulation.

d. It is important that the defibrillatory current be applied promptly before myocardial anoxia has developed or after it has been corrected by external cardiac massage.

e. Necessary cardiac resuscitation equipment and medication should be available on a mobile cart in a readily accessible part of the hospital.

f. This procedure should be useful in both medical and surgical patients having cardiac arrest.

g. We wish to emphasize the importance of this equipment being used by only well instructed personnel and physicians, as this is a potentially dangerous procedure.

## SUMMARY

1. The procedure adopted for the prompt management of cardiac emergencies has been outlined.

2. The successful treatment of an illustrative case of ventricular fibrillation by external cardiac massage and external defibrillation has been presented.

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# Perforative Appendicitis

**The importance of perforation in acute appendicitis is emphasized and a report of a series of 128 cases of perforative appendicitis is presented.**

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In spite of the many modern advances in surgical care and treatment, the morbidity and mortality from acute appendicitis still remains appreciable. According to the Vital Statistics of the United States, 1,982 persons died of appendicitis in 1957 and 1,845 in 1958.[1] The greatest single factor influencing this state of affairs is, of course, the presence or absence of perforation. Constant efforts must be made to lower the incidence of perforative appendicitis without removing an abnormally high percentage of normal appendices. This is a study of the factors contributing to the morbidity from acute appendicitis as they exist in a 75 bed rural hospital in Southeastern Missouri.

## Material

This is a 13 year survey of 128 consecutive cases of perforative appendicitis admitted to the Bonne Terre Hospital at Bonne Terre, Missouri, from January 1, 1947, to January 1, 1960. During this period there were a total of 1,013 appendectomies performed with a pathologic diagnosis of acute appendicitis. This represents a perforation rate of 12.6 per cent. Of this group, 88 were found to have peritonitis either diffuse or localized and 40 presented with an appendiceal abscess.

*Age Incidence.*—There were 410 children 14 years of age and under with acute appendicitis, approximately 40 per cent of the entire series. There were 60 children with perforative appendicitis representing only a slightly higher incidence of perforation (14.6 per cent) in this younger age group. More striking is the 29 per cent incidence of perforation in the 69 patients more than 50 years of age (table 1).

*Complications.*—The complication rate in the non-perforative group was 2.3 per cent and included one of the two deaths in the entire series (table 2). The complication rate in the 128 perforative cases was 54 per cent, demonstrating a marked difference (table 3). The stage of the disease, i.e., peritonitis or abscess, did not significantly affect the complication rate. The one death in the perforative series was apparently unrelated to the appendicitis. It occurred in a 70 year old man who suffered an acute ileofemoral thrombosis on the sixth postoperative day.

TABLE 1

PERCENTAGE OF PERFORATION BY AGE GROUP

| *Age* | *Total Acute App.* | *Total Perforated* | *Per Cent Perforated* |
|---|---|---|---|
| 0-14 | 410 | 60 | 14.6 |
| 15-50 | 534 | 47 | 8.8 |
| 50+ | 69 | 21 | 29.0 |
| | —— | —— | —— |
| | 1013 | 128 | 12.6 |

TABLE 2

COMPLICATIONS IN 885 ACUTE NONPERFORATIVE CASES

| | |
|---|---|
| Wound Abscess | 7 |
| Intraabdominal Abscess | 0 |
| Respiratory | 3 |
| FUO | 3 |
| Ileus | 2 |
| Thrombophlebitis | 1 |
| Intestinal Obstruction | 1 |
| *Cardiac Arrest | 1 |
| Acute Cholecystitis | 1 |
| Postoperative Jaundice | 1 |
| | 20 (2.3%) |
| Total | 20 (2.3%) |

*Expired

*Effect of Delay in Treatment.*—Selection of an arbitrary point in time to indicate delay in treatment proved difficult. It was noted, however, that in the nonperforative group 70 per cent were operated upon within 24 hours of the onset of symptoms. Consequently an arbitrary time limit

TABLE 3

COMPLICATIONS IN 128 CASES OF PERFORATIVE APPENDICITIS

| | |
|---|---|
| Wound Abscess | 35 |
| Intraabdominal Abscess | 13 |
| Fever of Undetermined Origin | 9 |
| Respiratory | 4 |
| Wound Dehiscence | 2 |
| Fistula | 1 |
| Thrombophlebitis | 1 |
| *Acute Ileofemoral Thrombosis | 1 |
| Parotitis | 1 |
| Late Ileus | 1 |
| Cystitis | 1 |
| Total | 69 (54%) |

*Expired

of 24 hours was chosen and anyone in the perforative series operated upon after a period of 24 hours from onset of symptoms was placed in the delay treatment group. Thus, 99 (77 per cent) fell into this category. Of this number, 56 were due to patient delay and 44 were due to the inability of the physician to establish the diagnosis. In 35 of the delayed cases the symptoms were atypical and the physical signs initially were not considered to be consistent with the diagnosis of acute appendicitis. The percentage of those with peritonitis and with abscess formation in the delay and non-delay group was essentially the same (table 4). The hospital stay in each group was 12.5 days. The complication rate of 51 per cent in the delay group was slightly lower than the 60 per cent complication rate in the non-delay group. Thus it would seem, in this series at least, that delay in diagnosis after perforation had already occurred had little effect on the over-all morbidity.

TABLE 4

EFFECT OF DELAY IN DIAGNOSIS ON STAGE OF THE DISEASE

| | *Peritonitis* | *Abscess* |
|---|---|---|
| Delay in Diagnosis | 61 (61%) | 38 (38%) |
| No Delay in Diagnosis | 17 (59%) | 12 (41%) |

*Effect of Drainage.*—Drains were used in approximately one fourth of the cases but did not appear to affect the incidence of postoperative abscess (table 5).

*Effect of Antibiotics.*—Postoperatively antibiotics were used in all cases (table 6). These figures suggest that the use of the broad spectrum antibiotics have reduced the incidence of postoperative abscess formation. At present, sensitivity studies are initiated at the time of operation and help guide the antibiotic therapy.

*Other Factors.*—The type of anesthesia had no apparent effect on the morbidity from perforative appendicitis. The use of nasogastric suction varied with the individual surgeon and though appearing efficacious, its effect could not be accurately appraised. The effects of various methods of appendiceal stump closure could not be evaluated because of inconsistent recording of this phase of the operation.

TABLE 5

EFFECT OF DRAINAGE ON LOCAL COMPLICATIONS

| | *Drains (32)* | *No Drains (96)* |
|---|---|---|
| Wound Abscess | 8-25% | 27-28% |
| Intraabdominal Abscess | 5-16% | 8- 8% |
| Total | 13-40% | 35-36% |

TABLE 6

EFFECT OF ANTIBIOTICS (128 PERFORATIVE CASES)

| *Antibiotic* | *No. Cases Used* | *No. Postop Abscesses* | *Per Cent* |
|---|---|---|---|
| Penicillin | 22 | 11 | 50 |
| Pen. and Streptomycin | 61 | 36 | 59 |
| Tetracycline | 11 | 1 | 9.9 |
| Multiple (P & S & Tetrac.) | 34 | 8 | 25 |
| Total | 128 | 56 | 44 |

## Discussion

With current methods of management the mortality rate associated with simple non-perforative acute appendicitis is slight. In this series as in others it is again obvious that once perforation occurs, a relatively benign disease is converted to a significantly more serious one. Through prolonged study and persistent effort the mortality rate attending the perforation of the acutely inflamed appendix has been reduced. Indeed, some series without a fatality have been reported.[2, 3] As borne out by this study there is still a significant increase in the morbidity after perforation has occurred.

Of obvious importance therefore is the prevention of perforation. Cantrell and Stafford emphasize that this accomplishment is dependent upon (1) the education of the public and (2) the education of the physician.[4] In this series 44 per cent of the cases involved patient delay and 34 per cent physician delay. Emphasis to the public on the dangers of appendicitis must be continued and efforts at reducing physician delay must be strengthened. As pointed out by Ochsner one cannot be complacent about this still serious problem.[5] Though much of the physician delay in treating acute appendicitis is seen in cases with atypical histories and findings, a higher index of suspicion on the part of the physician should reduce the incidence of appendiceal perforation. Certainly, as often pointed out, the removal of a significant percentage of normal appendices is justified.[6, 7, 8] With good surgical judgment this concept is consistent with a maintained low perforation rate without the removal of more than 25 to 30 per cent normal appendices.

In the Bonne Terre Hospital it was initially feared that efforts of the tissue committee to improve the diagnostic error involved in acute appendicitis might result in an increased rate of perforation. These fears were subsequently shown to be groundless in an earlier study by one of us.[9]

Consideration should be given to a third preventive measure: elective appendectomy in conjunction with laparotomy for other reasons. In the surgical practice of the present day, elective appendectomy may be performed in association with other procedures with minimal additional risk.[10, 11, 12] Certainly if the patient's tolerance of the primary procedure is poor, if modification of the surgical approach is required, or if other prohibitive conditions exist, e.g., peritonitis or poor operative risk, appendectomy should be deferred. However, if conditions permit, the prophylactic removal of the appendix at the time of other operations may help decrease the future mortality and morbidity of appendicitis.

It follows that the second line of attack on perforative appendicitis is its treatment. It has been shown that sound organized surgical management of these cases will remarkably decrease the mortality and morbidity rates.[2, 5, 13] Deserving reemphasis are the following points of management:

1. Adequate preoperative preparation: The brief delay of operation for the correction of electrolyte and fluid derangement is justified. Where abdominal distention is present intestinal decompression by means of nasogastric tube suction should be initiated immediately. We feel that nasogastric tube suction is indicated in all patients with perforative appendicitis. The early initiation of broad spectrum antibiotic coverage in obvious cases of peritonitis is considered wise and their administration in the preoperative intravenous fluids is recommended. Such antibiotic coverage may be adjusted when the results of culture and sensitivity studies are known. Consideration of these measures will substantially decrease the operative risk in critically ill patients.

2. Early operative intervention: Except for the brief but important delay for preoperative preparation of the patient the source of abdominal contamination, i.e., the perforated appendix, should be promptly removed. Excepted are patients with signs of localized abscess with obvious progressive improvement in their general status. The use of the gridiron incision is recommended because of lessened risk of postoperative herniation in cases with wound sepsis. Though we prefer ligation and inversion of the appendiceal stump, the method of stump management is not considered a critical point. Drains are used only in the presence of well walled off abscess cavities. Free fluid and detritus are carefully aspirated. Judicious exploration (usually only in the local area, i.e., pelvis, adjacent loops of intestine and right peritoneal gutter) is carried out with the breaking-up and aspiration of purulent loculations. Though its value is unproven, we feel that sterile saline irrigation of the operative field and successive layers of the abdominal wound closure has merit. Either the primary closure of the cutaneous wound or the employment of a method of delayed closure should be accompanied by the careful postoperative observation of the wound with prompt opening of the wound at the earliest appearance of signs of suppuration.

3. The following postoperative measures are emphasized: Carefully controlled maintenance and corrective parenteral fluids; continued nasogastric tube suction as indicated; continued antibiotic therapy; avoidance of intestinal stimulation, and alertness for signs of localized postoperative inflammation with drainage where indicated. The role of such factors as Fowler's position and steroid administration is uncertain but may be of benefit in selected cases.

## SUMMARY

1. A series of 128 cases of perforative appendicitis is presented.

2. The importance of perforation in acute appendicitis is reemphasized.

3. Indoctrination of the public, physician education and the role of prophylactic appendectomy as preventive measures are discussed.

4. Important factors in treatment are reemphasized.

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## NARCOTIC ADDICTION

A joint statement on narcotic addiction in the United States was made by the American Medical Association and the National Research Council of the National Academy of Sciences on May 14. The statement follows:

The American Medical Association, and the National Research Council for many years have been concerned about and have studied the narcotic drug addiction problem. To assist in carrying out its studies, the American Medical Association collaborated with the American Bar Association in establishing a Joint Committee which made an Interim Report to the two organizations in 1958, and a Final Report in 1959.

It is concluded that there is widespread public and professional misunderstanding about this subject, specifically (1) that the Federal Bureau of Narcotics believes drug addiction to be a crime; a belief that is contrary to the federal law and its application by the Bureau, and (2) that the American Medical Association proposes the establishment of community ambulatory clinics for the withdrawal of narcotics from addicts or for the continuing maintenance of addicts on narcotics; a belief that is contrary to the official position of the American Medical Association.

Historically society has found it necessary to employ legal controls to prevent the spread of certain types of illness that constitute a hazard to the public health. Drug addiction is such a hazard.

The successful and humane withdrawal of individuals addicted to narcotics in the United States necessitates constant control, under conditions affording a drug-free environment, and always requires close medical supervision.

The successful treatment of narcotic addicts in the United States requires extensive post-withdrawal rehabilitation and other therapeutic services.

The maintenance of stable dosage levels in individuals addicted to narcotics is generally inadequate and medically unsound and ambulatory clinic plans for the withdrawal of narcotics from addicts are likewise generally inadequate and medically unsound.

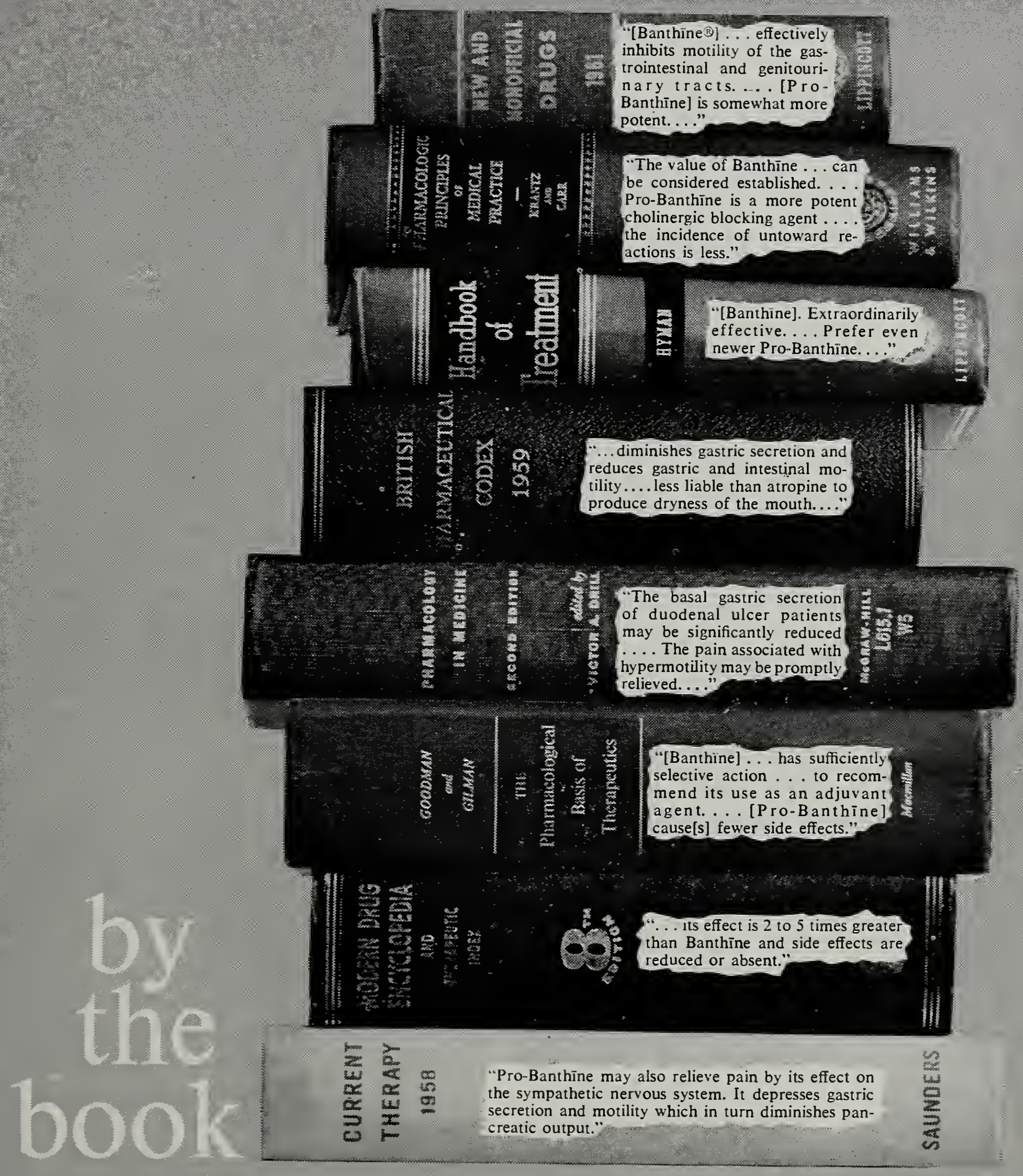
As a result of these conclusions the American Medical Association and the National Research Council oppose on the basis of present knowledge such ambulatory treatment plans.

These two organizations support (1) after complete withdrawal, follow-up treatment for addicts, including that available at rehabilitation centers, (2) measures designed to permit the compulsory civil commitment of drug addicts for treatment in a drug-free environment, (3) the advancement of methods and measures towards rehabilitation of the addict under continuing civil commitment, (4) the development of research designed to gain new knowledge about the prevention of drug addiction and the treatment of addicted persons, and (5) the dissemination of factual information on narcotic addiction.

### Statement of the Bureau of Narcotics

Mr. Henry L. Giordano as the Acting Commissioner of the Bureau of Narcotics issued the following statement relative to the Joint Statement of the American Medical Association and the National Research Council regarding the narcotic drug addiction problem in the United States:

*(Continued on page 810)*


NEW AND NONOFFICIAL DRUGS 1961
LIPPINCOTT
PHARMACOLOGIC PRINCIPLES OF MEDICAL PRACTICE
KRANTZ AND CARR
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Handbook of Treatment
HYMAN
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BRITISH PHARMACEUTICAL CODEX 1959
PHARMACOLOGY IN MEDICINE
SECOND EDITION
edited by VICTOR A. DRILL
McGRAW-HILL
GOODMAN and GILMAN
THE Pharmacological Basis of Therapeutics
Macmillan
MODERN DRUG ENCYCLOPEDIA AND THERAPEUTIC INDEX
8TH EDITION
CURRENT THERAPY 1958
SAUNDERS
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# A Program of Medical Care for the Aged

## *Special Article*

THE MODERN general hospital of today is geared to the intensive care of the acute patient. The length of stay, both for medical and surgical cases, is becoming shorter, while more intensive therapeutic and diagnostic procedures are packed into fewer days. In this setting, the patient with a chronic illness does not fare well. His slow progress and the achievement of only partial treatment objectives fails to arouse the proper interest and enthusiasm of physicians, house staff and nurses. Yet, the number of long-term patients is increasing as the population grows older. These patients do not recover completely. They retain residual disabilities from each attack of illness. It is the task of the medical profession to tide them over set-backs and to promote adjustments which will make it possible for them to live as normal a life as possible. In the course of management it often becomes necessary to hospitalize these patients periodically and for prolonged periods of time. For these purposes the long-term service in a general hospital, set aside from acute units, offers definite advantages.

This paper will describe the operation of such a service for the chronically ill at the Jewish Hospital of St. Louis, especially as it refers to the care of the aged.[1] The predecessors of the chronic disease division was an independent institution, the Jewish Sanatorium, located on Fee Fee Road in St. Louis County. It began as a tuberculosis sanatorium but, as the incidence of tuberculosis decreased, it became an institution for the chronically ill. As such, it was typical of many such institutions. It was staffed by a part-time medical director and two resident physicians. It maintained a small laboratory and x-ray department. The scope of its activities was limited because of its distance from town. Consultant services were difficult to obtain. Surgery could not be performed, blood transfusions could not be given and the lack of adequate laboratory facilities made the use of many modern drugs such as anticoagulants inadvisable. Therefore, the emphasis had to be on custodial care. The Sanatorium was, in fact, as much a nursing home as it was a hospital.

In 1951 the Jewish Sanatorium merged administratively with the Jewish Hospital and, in 1956, after the completion of an extensive building program the entire operation was moved to the main hospital. At the same time, the Miriam Rehabilitation Hospital, which had also been an independent institution under Jewish auspices, moved into the main hospital. After six months the Rehabilitation and Chronic Disease Divisions were combined into one service under unified medical direction. This step was taken after it had become obvious that the care of the medically long-term ill and the physically disabled rehabilitation patients overlapped to such an extent that the merger was to the advantage of both groups.

**A program for the care of the aged in connection with a hospital is described.**

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**This paper was presented at the 14th annual meeting of the Missouri Health Council meeting in Jefferson City on September 6, 1961.**

For administrative purposes the division is subdivided into a department of physical medicine with 16 beds and a department of chronic medicine with 63 beds. The department of physical medicine cares for patients with serious physical disabilities, often of a younger age group. Many of these patients are referred by state agencies or other third parties such as insurance companies. This paper will deal with the department of chronic medicine which is chiefly engaged in the multiphasic care of the aged.

The combined rehabilitation-chronic disease division operates on two nursing units, one with 35 beds and one with 44 beds. One floor houses the physically disabled rehabilitation patient and the more active chronic patient, while the other floor is set aside for the chronic patients, mainly of the geriatric group which require less intensive care. Acute patients are not admitted to these services in order to allow the nursing staff to give undivided attention to the needs peculiar of the long-term patients.

### MEDICAL STAFF

The medical staff consists of the full-time director of the division, a full-time associate physician and a part-time assistant physician. They are responsible for the care of the 79 patients of the entire rehabilitation-chronic disease division. Night calls are handled by two externs who are supervised, if necessary, by residents of the division of internal medicine. Consultants in all specialties are readily available.

### NURSING STAFF

Experience has shown that chronic patients require almost as much nursing time as acute patients. However, the type of personnel is markedly different. A higher percentage of practical nurses and non-professional workers can be utilized, since more emphasis is placed on bedside nursing and less on technical procedures and treatment. Since there are fewer admissions to the chronic disease service, less time is required for scheduling and coordinating activities. Much nursing time is devoted to feeding or assisting with meals, turning of patients and getting them up and dressed for the day's activities. Much of this can be delegated to non-professional personnel who may have undergone periods of on-the-job training. Two nurses with special education in rehabilitation nursing are employed. Their function is the training of patients in self-care activities. They are also engaged in the teaching of student nurses in rehabilitation nursing.

The division employs six physical therapists and three occupational therapists who serve the entire hospital. A social worker has been assigned from the hospital's social service department.

### ADMISSION AND DISCHARGE PROCEDURES

Patients are admitted either as service patients or as private patients under the care of their own physician, who must be a member of the hospital staff. Only those who pay the full rate of care may be admitted as private patients. Service patients are under the care of the director of the division and his staff.

It is obvious that a chronic disease service will lose its identity unless admissions are restricted to patients with medically treatable long-term illnesses. Patients are admitted only if their condition requires treatment in a hospital setting and if they can be expected to benefit from intensive medical or rehabilitative care. While diagnostic criteria are helpful in determining whether or not a patient is suitable for chronic disease care, they do not suffice in themselves. One stroke victim may be rejected because he may have reached a level beyond which no further improvement can be expected. He will need protective care in a nursing home but only infrequent medical attention. Another patient suffering from a stroke may still be capable of improvement, and he should be admitted and exposed to medical and rehabilitative care until he has reached the peak of recovery. Some terminal cancer patients may require little medical attention and can be treated at home. Others may require frequent injections, tube feedings and parenteral fluids. These patients need hospital care for their comfort and they should be accepted to a chronic disease service even though their outlook is hopeless. In accepting these patients the statement made by the Chronic Disease Commission which says that "A hospital should not exclude capriciously or arbitrarily, because of diagnosis, patients who can benefit from the care it offers" has been followed.[2]

In order to assure the proper selection of patients, all applicants are screened by the director of the division. This applies for private as well as for service cases. The patient's attending physician fills out an application blank and the director of the service either accepts or rejects the patient after an examination or on the basis of the information supplied by the patient's physician. The medical staff has accepted the need for this screening procedure and has cooperated fully. If a patient is rejected, the family is referred to the social worker who will help them work out an alternate plan. This referral blunts the shock of rejection and indicates to the family that the hospital is still interested in their problem and is willing to help. Some patients may be referred to the hospital's Home Care Program. In other cases the social worker may assist in selecting a suitable nursing home.

While most patients are referred from physicians of the Jewish Hospital staff, the admission is open to any patient who meets the requirement of medical eligibility.

Patients are discharged when they no longer require care in a hospital. The physician in charge discusses this with patient and family and then refers them to the social worker to help in discharge planning. No patient is actually discharged until such a plan has been carefully worked out.

The rate of care is $17.00 per day in a semiprivate room and $21.00 in a private room. Additional charges are made for laboratory, x-ray, medication and physical therapy. There is no charge for occupational therapy, social service or recreational activities. For service patients, a rate is set commensurate to their financial ability. The operation receives support from the United Fund and the Jewish Federation.

### Medical Care

The medical care of the aged differs from the management of the younger age group by a shift of emphasis. Older people often suffer from several illnesses which may or may not be related to each other. Disease and injury more often leave permanent disability. The symptoms of various diseases in the quite old vary from the textbook picture. Infections may produce little or no fever, coronary occlusions may cause little or no pain. An elderly patient suffering from thyrotoxicosis may complain of fatigue and listlessness instead of nervousness and excitability. In a geriatric service the physician must be aware of the shift of symptomatology, or else he will overlook important diagnoses. He must remember that nutritional failure and anemias may occur surreptitiously and that elderly patients may have gastrointestinal lesions or kidney diseases of serious nature without the usual warning signs. Response to drugs may be atypical. In general, it is well to remember that the elderly patient who does not do well may have a serious organic illness which must be looked for diligently. To excuse a patient's poor condition by age alone instead of looking for other causes is not good geriatric medicine. Mental dullness may be due to poor vision or hearing. The elderly patient may not be aware of this disability, but proper glasses or a hearing aid can, at times, perform miracles.

The medical care of the elderly chronic patient requires a thorough diagnostic evaluation and continual vigilance. Therapy should be active and aggressive. Elderly patients, even with concomitant heart disease, may tolerate necessary surgery amazingly well and their general condition may be much improved after the removal of a gastrointestinal cancer or an infected gallbladder. Today's anesthesiology, surgical technic and postoperative care have greatly reduced the danger of surgical intervention even in the quite elderly person.

Intensive care of the aged must include rehabilitative measures. The goal of geriatric rehabilitation is to return as many aged chronically ill patients as possible to their homes. Rehabilitation must start early and it must be pursued energetically. Provided a patient's mental condition is adequate for living in the community, he can usually be taken care of at home if the following conditions are met:

1. He should be ambulatory or close to being independent in a wheelchair.
2. He should be independent in his self-care.
3. He should have normal or near-normal control of bladder and bowels.
4. His medical care should be simplified to such an extent that he can be handled at home and the family should be given all necessary help to make medical care at home possible. Here, an organized home care program is invaluable.

Inability to walk can be due to many different causes. An accurate evaluation of gait defects must be performed first. After that, definitive management can be initiated. Weak muscles can be strengthened by exercises. Contractures can be stretched by physical therapy. Braces, crutches and walkers can be employed. The patient must be trained in the use of these devices. Often, the period of training is prolonged and requires much patience, both by the therapist and the patient. Yet, persistence pays off many times. The use of prostheses should be seriously considered in all elderly amputees. Age, alone, is no contraindication to prosthetic fitting and training. If in doubt it is better to err on the side of aggressive management and prescribe a prosthesis even at the risk of failure.

Patients who cannot walk can often be trained to an almost independent wheel-chair existence. Particularly, they should be taught to transfer from chair to bed, independently or with somebody steadying him but not lifting him. If a patient has reached this goal he can go home and live with his wife who can give him this assistance without undue demands on her own physical strength.

Training in self-care activities, bathing, dressing, feeding, plays an important part in a geriatric service. The nurses keep accurate records of the patient's achievements. The training must start early, before the patient has fallen into a pattern of complete dependency. It should start on the acute service where patients are usually treated first, since so often disability in the elderly begins with an acute illness.

Lack of bladder and bowel control is a serious disability. Families usually will not be able to cope with a habitually incontinent patient. Incontinence, therefore, must be treated aggressively. It should always be regarded as a condition which is potentially correctible. Incontinence may be due to infection or obstruction. It may be due to a spastic or to an overly relaxed bladder muscle. It may be a habit in a senile person with dulled sensorium or it may be due to a spinal cord lesion. Urine examination, cultures and cystometric studies will provide a differential diagnosis and management will depend on the results. Even the senile incontinent patient can often be retrained by persistent efforts of the nursing staff.

The chronic disease service of the Jewish Hospital is organized to give the multiphasic geriatric care which has been outlined. A complete diagnostic work-up with all necessary laboratory examinations and close medical supervision are provided.

Physical therapy under medical direction gives gait training, training in transfer technics, muscle reeducation and relief of arthritic pain and disability. The nursing service trains patients in self-care and attempts to reeducate bowel and bladder control.

Eye examinations and hearing tests are given frequently and defects corrected whenever possible. Speech therapy is available and widely used. The services of a dentist and chiropodist are available.

A special program has been organized for patients with chronic pulmonary diseases, such as emphysema and asthma. The patient is first given respiratory function studies. Depending on the result, the patient is then treated with inhalation therapy and breathing exercises. The results have been gratifying in many patients who have been partly disabled by chronic lung diseases.

Occupational therapy fulfills an important function in the care of the aged. In the young person the occupational therapist often gives prevocational training. In the elderly, the emphasis is on activities which are enjoyable and tend to keep the patient in contact with the world around him. In our experience, occupational therapy to the aged is best given in groups of five to seven. These groups work on joint projects—baking a cake for other patients, making decorations for a party or making scrapbooks for the pediatric division. The accent is on activities which are useful to others. This is important because it helps the older patient to see himself as a useful member of a community. An old man who has done no woodwork for 50 years will still be thrilled after having completed a simple toy for a grandchild. On other days the same groups meet with the recreational worker to listen to records or piano playing, to sing songs, to read a story or simply to talk. It is often difficult to overcome a patient's initial resistance to these activities.

They feel that they are sick and should be in bed. Occupational therapy and recreation strikes them as childish and a waste of time. Most patients will overcome this early hesitation and eventually they will enjoy it. It gives variety to their day; it takes them away from the sick bed and gives them a feeling of usefulness. They complain less, are less demanding and less introspective.

Social service plays a vital role in the chronic disease program. All patients are seen by the social worker shortly after admission and, thereafter, as frequently as necessary. Chronic illness always brings with it emotional problems and difficulties of a practical nature. The guidance of patient and family by the social worker is, therefore, invaluable. This becomes particularly true when the patient's discharge is contemplated. The families are often more apprehensive than actually unwilling to have a chronically ill patient returned to their home. The social worker can give practical advice, help arrange for help at home and guide patient and family through a difficult period of readjustment.

There is a close working relationship between the chronic disease service and other departments of the hospital. Patients are transferred to acute divisions, particularly surgery, whenever necessary, and return to the chronic disease division when their acute illness has subsided. The Home Care Program is a frequent resource for discharge of chronic patients. The assurance that the entire apparatus of the hospital will be available to the patient at home makes it much easier for families to accept the patient and care for him. Many patients would have never been discharged had Home Care not been available to them. On the other hand, patients of the Home Care Program who require hospitalization on the long-term unit are given preference and are quickly admitted. This cooperation has given necessary fluidity to the comprehensive care of the chronically ill and it has made it possible, in most instances, to preserve valuable hospital beds for those who really need them.[3]

A close working relationship exists also with the Jewish Center for Aged, an independent institution under Jewish auspices. The Center accepts patients from the hospital's chronic disease service who no longer need hospital care if they meet their admission requirements. The hospital, in turn, furnishes services and consultants to the Center for Aged.

This type of program is neither simple nor is it inexpensive. It requires well trained personnel with different skills and it must make use of all the resources of a general hospital. Nevertheless, the initial expenditures are far outweighed by the saving accrued by keeping a patient out of a custodial institution. It is less expensive to treat a stroke victim intensively for three months in a rehabilitation service and then send him home, instead of keeping him in a vegetative existence in a nursing home for many years. It is less costly to return a patient with Parkinsonism or arthritis to a hospital for a few weeks at a time, several times a year, and then send him home, instead of keeping him in a custodial institution indefinitely. Many studies have shown that gains made by intensive treatment of the chronically ill are maintained for long periods of time.[4, 5, 6] At Jewish Hospital's Chronic Disease Division, 57 out of 99 patients discharged during the year 1960 returned to their own homes. A more detailed follow-up study was done on 43 unselected geriatric patients who, during the period of one year, were discharged from the chronic disease division of the Jewish Hospital to their own homes.[7] These patients were reevaluated within six to 12 months after discharge and, at that time, 30 of the 43 patients were still in their own homes. Most of them had retained the level of independence which they had reached in the rehabilitation program, unless they were struck by new illness. Progress of the disease process itself constituted the chief limitation to rehabilitation.

Diseases which do not progress, such as hip fractures, or progress slowly such as arthritis and Parkinson's disease showed the most favorable results. While age in the oldest group of patients (above 80) did exert some adverse influence, the overall picture indicated that age plays a relatively minor part in the individual's reaching and maintaining a maximum level of achievement. Further studies will have to be done, particularly to evaluate the influence of motivation in success or failure.

In conclusion, it should be pointed out again that the care of the elderly, preventive and rehabilitative, constitutes one of our outstanding health care problems. There are now 15 million persons over the age of 65 in our country. Of These, 750,000 are in institutions. It is estimated that by 1980 the number of persons over the age of 65 will have risen to 22 million and 1.1 million will be in institutions. This means that 350,000 custodial bed facilities will have to be added in 20 years unless it is learned how to keep the aged in better physical and mental conditions, permitting them to outlive their lives in their own homes.

For every old person who must be in a nursing home, there are eight to nine other residents of custodial institutions who could have remained in their homes had they been given proper care early enough and energetically enough.

Experience indicates that the general hospital is the most suitable place to conduct a geriatric rehabilitation program. Most elderly patients are first admitted to the general hospital when they become ill and disabled. The transfer to a long-term service within the same hospital is much more acceptable to family, patient and private physician than the discharge to another institution which bears the stigma of a chronic hospital. Therefore, the rehabilitation program can be started before the acute phase has abated, and intensive medical care and rehabilitation can be carried on concurrently. Hence, the chances for success are much brighter. Hospitals and social agencies should reexamine these problems and organize their resources to make the advances in medicine available to the chronically ill and aged and to prevent their premature and often unnecessary deterioration.

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H. E. PETERSEN, M.D., *St. Joseph*

# A.M.A. Annual Session

## *Special Article*

**Proceedings of the House of Delegates and the session of the American Medical Association held in Chicago, June 24-28, 1962, are summarized. Delegates Richard H. Kiene, M.D., Kansas City; A. W. Neilson, M.D., St. Louis; Durward G. Hall, M.D., Springfield, and H. E. Petersen, M.D., St. Joseph, were present at the session as well as Alternates Rolla B. Wray, M.D., Nevada; Robert Kelley, M.D., St. Louis; Guy N. Magness, M.D., University City, and J. Loren Washburn, M.D., Versailles.**

Dr. Kiene served as a member of the Reference Committee on Executive session. Dr. Alphonse McMahon, St. Louis, served as delegate from the Section on Military Medicine and as Chairman of the Reference Committee on Medical Military Affairs. Dr. M. B. Casebolt, Kansas City, served as alternate delegate from the Section on General Practice.

Past President, Dr. Ralph Perry, Kansas City, was present in order to attend the AMPAC program. Dr. W. J. Shaw Sr., Fayette, former alternate delegate, was elected chairman of the AMA Section on General Practice. Dr. Donald M. Dowell, Chillicothe, President of MSMA, attended the session.

Mrs. Richard A. Sutter, University City, former president of the Woman's Auxiliary to MSMA was elected vice president of the North Central Region of the Woman's Auxiliary to the AMA.

Health care for the aged, medical discipline, composition of the AMA Board of Trustees, a study of the American Board of Abdominal Surgery, relations with the American College of Surgeons and voluntary health insurance were among the major subjects acted upon by the House of Delegates at the American Medical Association's 111th Annual Meeting held June 24-28 in Chicago.

Dr. Edward R. Annis of Miami, Florida, chairman of the AMA National Speakers Bureau and well known spokesman in the campaign against the King-Anderson Bill, was chosen President-elect of the Association. Dr. Annis will become President at the June, 1963, annual meeting in Atlantic City, succeeding Dr. George M. Fister of Ogden, Utah, who assumed office at the Tuesday night inaugural ceremony in Chicago.

The AMA 1962 Distinguished Service Award was voted to Dr. Russell L. Cecil, 81, of New York City, senior editor of the "Textbook of Medicine" and one of the nation's leading researchers in the field of arthritis.

Final registration figures at the meeting reached a total of 42,643, including 14,092 physicians.

### Health Care for the Aged

The House received 17 resolutions expressing full support of the Kerr-Mills program and firm opposition to the King-Anderson type of legislation. In reaffirming the position of active opposition to the King-Anderson Bill, the House cited the following reasons:

"1. the lack of need for such a plan.

"2. that it would provide inadequate care for all aged rather than complete care for those who need help.

"3. the fact that inherent in the use of the Social Security mechanism are governmental controls of medical practice which would increase with the expansion of the program.

"4. deterioration of the quality of medical care not only for the aged but for the population as a whole."

In reaffirming strong support for the Kerr-Mills Act, the House declared that "the Kerr-Mills method should be given a fair and reasonable chance to meet the need and thus remove the demand for further federal legislation."

It urged that in states in which existing programs indicate a need for a Kerr-Mills implementing law, each state association should actively sponsor and promote with other responsible citizens the enactment of such a law. It also urged the state associations to "work actively with other responsible citizens in reviewing the functions of the law, evaluating its effectiveness and aggressively supporting improvements in programs to aid those aged who need help so

**Delegates and alternates and the President of MSMA. Dr. Wray, in attendance at the session, was not present for the picture.**

as to achieve the provision of quality medical care and service."

The House took no action on one resolution which called for non-participation in the implementation of the King-Anderson Bill, but it urged individual physicians to give particular consideration to the following sections of the Principles of Medical Ethics:

"Section 1. The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

"Section 5. A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

"Section 6. A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioriation of the quality of medical care."

Commenting on the Association's fight against the King-Anderson Bill, Dr. Leonard W. Larson, retiring President, told the opening session of the House that "this great struggle has been testing again whether the science and art of medicine will be permitted to grow and flourish in freedom, or whether progress in medicine will be stunted and shriveled by the excesses of government control."

He declared that the steadfast refusal of the AMA to compromise on basic principles "has been a source of strength for us and our friends." Dr. Larson expressed confidence in ultimate victory, but he added that victory will impose a solemn obligation of responsible leadership for all physicians.

Also commenting on the question of compromise, Dr. Fister in his inaugural address said "we will not compromise with those who regard medical care problems as simply playthings in the game of politics—gimmicks to attract the votes of the gullible."

## MEDICAL DISCIPLINE

To implement one of the major recommendations made by the Medical Disciplinary Committee at the June, 1961, meeting in New York, the House approved a change in the By-laws under which a proposed Section 1 (B) of Chapter IV will now read:

"In addition to such disciplinary action as may be taken under the constitution and bylaws of the component society and constituent association to which the member belongs, or when a state medical association to which a member belongs requests the AMA to take disciplinary action, or when at the request of the American Medical Association the state association to which the member belongs consents to disciplinary proceedings by AMA, the Judicial Council, after due notice and hearing, may censure him, or may suspend or expel any member of the American Medical Association from AMA membership only for an infraction of the Constitution or these By-laws or for a violation of the Principles of Medical Ethics."

## AMA BOARD OF TRUSTEES

The House approved a report of the Ad Hoc Committee on the Board of Trustees which recommended that the size of the Board be increased from 11 members to 15 members. This will be accomplished by adding three elected members and by including the immediate past president of the Association for a one year term. The House also accepted a committee recommendation that set the term of office for elected Board members at three years and limited the number of terms to three, for a maximum total of nine years' service. To implement the House action, the Council on Constitution and By-laws submitted changes in the Constitution and By-laws for consideration at the 1962 Clinical Meeting.

### American Board of Abdominal Surgery

A study report from the Council on Medical Education and Hospitals, recommending that recognition should not be granted to the American Board of Abdominal Surgery as a specialty board, was approved by the House. In accepting the Council report, the House also declared its disapproval in principle of establishing specialties which are based largely or wholly on an arbitrarily defined anatomical region of the body.

The study, which was carried out under instructions from the House of Delegates at the 1961 Clinical Meeting, concluded that the present contribution of the American Board of Abdominal Surgery to the advancement of surgery and the betterment of public health is inadequate in many important respects. It also concluded that the American Board of Abdominal Surgery does not offer significant potential for the advancement of surgery and the betterment of public health.

Missouri Delegates in the House of Delegates.

### American College of Surgeons

In considering a Board report and four resolutions involving surgical assistants and relations between the AMA and the American College of Surgeons, the House declared that the adoption and interpretation of the Principles of Medical Ethics is the prerogative and duty of the American Medical Association. It also restated the Association's June, 1961, policy statement in the following manner:

"1. Each member of the AMA is expected to observe the Principles of Medical Ethics in every aspect of his professional practice.

"2. Each doctor engaged in the care of the patient is entitled to compensation commensurate with the value of the services he has personally rendered.

"3. No doctor should bill or be paid for a service which he does not perform; mere referral does not constitute a professional service for which a professional charge should be made or for which a fee may be ethically paid or received.

"4. When services are rendered by more than one physician, each physician should submit his own bill to the patient and be compensated separately whenever possible.

"5. It is ethically permissible in certain circumstances, however, for a surgeon to engage other physicians to assist him in the performance of a surgical procedure and to pay a reasonable amount for such assistance. This principle applies whether or not an assisting physician is the referring doctor."

### Voluntary Health Insurance

In accepting a Council on Medical Service report on the utilization of state and federal tax funds to provide voluntary prepayment health insurance protection to assist the aged in meeting the costs of health care services, the House approved the following policy statement:

"1. The need for application of the prepayment or insurance principle to protect our people against the costs of medical care is fully recognized and applies to all ages rather than to the aged alone.

"2. Persons financially able to prepay their own expenses are expected to do so and must be encouraged rather than compelled to do so.

"3. Persons financially unable to prepay adequately their expenses may properly be assisted to the degree necessary by their families, their communities, their states and, if these fail, by the federal government—but only in conjunction with other levels of government.

"4. The prepayment system should be devoid of governmental controls.

"5. Dignity and self-sufficiency for the individual should be upheld.

"6. The protection offered must be reasonably comprehensive rather than token in character."

The House recommended that the Board of Trustees and the Council on Medical Service explore all possibilities, using these principles as a basis.

### Miscellaneous Actions

In considering reports and resolutions on a wide variety of subjects, the House also:

Learned that the Board of Trustees has instructed the Council on Drugs to conduct a study on the relationship between tobacco and disease.

Disapproved a suggestion that the Council on Medical Education and Hospitals be replaced by two separate councils on undergraduate and graduate medical education.

Referred to the Board of Trustees a proposal that at least six members of the Council on Medical Education and Hospitals shall be engaged primarily in the private practice of medicine in hospitals without a medical school affiliation and that no more than four members may be salaried personnel of a medical school or university.

Approved a resolution that honorariums be provided for the Association's elected officers in amounts to be determined by the Board of Trustees.

Adopted an AMA Statement of Principles on Mental Health and urged all constitute associations to lend active support to the First National Congress for Mental Illness and Health, to be held in Chicago in October.

Endorsed a resolution on employment of the handicapped, stating that each individual candidate for employment should be evaluated in light of his ability to perform useful work.

Approved a Guide to the Organization and Operation of Airport Medical Services submitted by the Council on Occupational Health.

Endorsed the joint statement on narcotic addiction by the AMA and the National Research Council of the National Academy of Sciences.

Urged automobile manufacturers to make seat belts, approved by the Society of Automotive Engineers, standard equipment on all automobiles.

Approved a recommendation that AMA meetings be scheduled as follows: Annual Meetings—1966, Chicago; 1967, Atlantic City, and 1968, San Francisco, and Clinical Meetings—1965, Philadelphia, and 1966, Las Vegas.

Recommended that the Council on Medical Education and Hospitals conduct a study of specialty residencies.

Reaffirmed its opposition to compulsory coverage of physicians under the Social Security Act, after receiving 11 resolutions opposing coverage and only two favoring the inclusion of physicians.

Accepted the report of the Committee on Communications as information, and, in considering the committee recommendations, suggested that the Executive Vice President present a report of Association activities to the House at each meeting.

### OPENING SESSION

At the Monday morning session, the AMA presented a special citation to Jackie Cooper, star of television, stage and movies, for his portrayal of a Navy doctor in the "Hennessey" television program. The 1962 Joseph Goldberger Award in clinical nutrition was presented to Dr. Edwards Albert Park of Baltimore for his investigations of rickets and scurvy in children. Dr. Larson received a plaque for his work on the medical advisory board of the Sears-Roebuck Foundation. The American Medical Association was given awards of appreciation from the Cuban Medical Association in Exile and the Girl Scouts of America.

Alternates Magness, Washburn and Kelley pose with MSMA President Dowell (second from right).

### INAUGURAL CEREMONY

Dr. Fister, in his inaugural address, declared that "we will cooperate, to our very utmost, with government officials, legislators and all Americans who are sincerely interested in finding sound, practical solutions to medical care problems—solutions which include both a respect for medical standards and a respect for the taxpayers."

Donald D. Van Slyke, Ph.D., research chemist at the Brookhaven National Laboratories, received the first AMA Scientific Achievement Award honoring outstanding contributions to medicine by non-physician scientists. Mrs. George Papanicolaou was given a special award honoring her late husband's service to mankind.

*(Continued on page 780)*

SOLOMON GARB, M.D., *Columbia*

# Thermonuclear Survival

## *Providing Safe Ventilation*

**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine*, and are published with permission of that journal.**

**Dr. Garb is secretary of Medical Education for national Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.**

**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

Since the radioactive contamination after a hydrogen bomb explosion will be largely in the form of a dust, that dust must be kept out of the shelter without interfering with adequate ventilation.

In basement shelters, built in existing houses, the house around the basement provides adequate protection against the radioactive dust getting into the shelter. It must be remembered that this dust is not invisible ordinarily, nor does it move with the same speed as air molecules. It is much like a handful of sand thrown into the air. There are, in addition, particles of fine radioactive dust produced by the hydrogen bomb explosion. However, these fine particles stay up in the air for long periods of time and lose their radioactivity high up in the stratosphere. The radioactive particles with which one is concerned in Civil Defense, are the relatively larger particles which fall to earth rapidly. In most cases these will be about the size of a grain of sand. Few of these particles will get through any sort of cracks in windows and doors, provided the windows and doors are kept closed.

It is for this reason that the Civil Defense authorities do not feel that filters or hand-blowers are necessary in basement shelters. On the other hand, the safety of the basement shelter in relation to radioactive dust particles is based entirely on the assumption that doors and windows all around will not only be closed but will not be broken. This may not prove to be a completely

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### A.M.A.

*(Continued from page 779)*

### Wednesday Session

Dr. Fister, in his Wednesday address, assured the House of Delegates, all AMA members and the citizens of this country that "during the next year there will be no letup in our campaign to preserve the high standards of our voluntary, free choice, medical care system." He said that no organization, especially one which thrives on challenge and opportunity to serve the public, can be static.

### Election of Officers

In addition to Dr. Annis, the new President-elect, the following officers were named at the closing session on Thursday:

Dr. J. P. Culpepper Jr., Hattiesburg, Miss., Vice President; Dr. Norman A. Welch, Boston, reelected Speaker of the House, and Dr. Milford O. Rouse, Dallas, Tex., reelected Vice Speaker.

Dr. Charles L. Hudson, Cleveland, Ohio, and Dr. Wesley W. Hall, Reno, Nev., were reelected to five-year terms on the Board of Trustees. Dr. Elmer G. Shelley, North East, Pa., was renamed to the Judicial Council.

Reelected to the Council on Medical Education and Hospitals were Dr. Warde B. Allan, Baltimore, and Dr. W. Clarke Wescoe, Lawrence, Kansas.

Dr. George W. Slagle, Battle Creek, Mich., was elected to the Council on Medical Service, succeeding Dr. Robert L. Novy, Detroit, who was ineligible for reelection.

For the Council on Constitution and By-laws, Dr. Walter E. Bornemeier, Chicago, was reelected, and Dr. James Monroe Kolb Sr., Clarksville, Ark., was named to fill the unexpired term of the late Dr. Walter E. Vest, Huntington, W. Va.

sound assumption. The blast wave from a large hydrogen bomb can easily shatter windows in a 25 mile radius. Then radioactive particles could get into the basement so that some contamination of the basement shelter would result. This, of course, must be kept in perspective. It is assumed that there will be no windows whatever in the shelter area itself. If a basement window in another part of the building is broken by the blast, and radioactive particles move along the floor toward the shelter area, the amount of contamination involved would probably not be enough to cause much trouble. At the most, it might make a few people in the shelter sick, but it is hardly likely that a lethal dose of radiation would be involved. Therefore, air filters and blowers are not absolutely essential in a basement shelter.

On the other hand, those who have gone to the trouble of making a basement shelter may feel that it is worthwhile to expend a slight degree of extra energy and money to increase the safety factor by eliminating entirely the possibility of radioactive dust seeping toward the shelter from a broken window or door. Also, the availability of an adequate blower and filter will make the stay in the basement shelter far more comfortable. Under those circumstances, the addition of a blower and filter will prove to be quite worthwhile.

Shelters which are separate from the basement must have a blower and filter. The shelter must be sealed and, at the same time, a constant supply of fresh, uncontaminated air must be provided. To do this requires as a minimum a hand operated blower, a special filter and a series of metal pipes for intake and exhaust.

*Air Blowers.*—The amount of air needed for each person will vary according to the activity of the occupants and the shelter design. Persons at rest will each need about three cubic feet of fresh air per minute. Moderate activity will raise the requirement to five cubic feet per minute, and heavy work may raise the requirement to as high as 10 cubic feet per minute. In general, it is safe to assume that no more than moderate work will be done and to plan the ventilating system on the basis of five cubic feet of fresh air per person per minute.

Unfortunately, to provide five cubic feet of fresh air per minute, it is necessary to draw more than five cubic feet into the shelter. The reason for this is that the fresh air is mixed with the stale air. When fresh air is drawn in some of the fresh air is pumped out with the stale air. The extent of this mixing varies with the shape of the shelter and the location of the openings of the intake and exhaust air pipes. If these openings are close together, most of the fresh air coming in will promptly go out again. In such a situation, to get 50 cubic feet of usable fresh air into the shelter, it may be necessary to pump more than 500 cubic feet of fresh air in. This of course is an impossibility in a family shelter. For this reason the intake and exhaust openings must never be close together.

Even if the intake and exhaust pipes are at opposite ends of the shelter, there will still be a considerable loss of fresh air through the exhaust. The amount will vary depending on the shape of the interior of the shelter. If the shelter has the form of a cube, like the reinforced concrete shelter, mixing of fresh and stale air will be extensive. This means that the amount of fresh air lost through the exhaust will vary depending on the amount already in the shelter. For example, consider a shelter containing 500 cubic feet of air. If at a particular time 250 cubic feet of fresh air are mixed with 250 cubic feet of stale air, the exhaust air will be 50 per cent stale and 50 per cent fresh. Thus, to get 50 cubic feet of usable fresh air added to the shelter contents, it will be necessary to draw in 100 cubic feet through the intake. As more and more fresh air is drawn in, a higher percentage of fresh air is wasted through the exhaust. In a shelter of this general shape it is almost impossible to get beyond a ratio of 75 per cent fresh air to 25 per cent stale air, no matter how much hand pumping of air is performed. Fortunately, this ratio is quite acceptable.

Nevertheless, it should be clear that in shelters shaped like a cube there will be an inherent inefficiency in the ventilating system. This should be compensated for by increasing the total capacity of the ventilating system. In general, it is a good idea at least to double the air supply. Accordingly if a cube-shaped shelter is built, it is wise to have 4 inch rather than 3 inch vent pipes, a blower capable of 100 cubic per minute, and a filter of at least 100 cubic feet per minute capacity.

The pipe shelter with its elongated cylindrical shape is somewhat more efficient in terms of ventilation. If the intake and exhaust vents are properly located and correctly directed, mixing of fresh and stale air will be minimized. The extent of the mixing depends on the diameter and length of the shelter. With smaller diameter shelters of considerable length, mixing is less than with larger diameter, shorter shelters.

TABLE 1

HAND-OPERATED BLOWERS

| *Manufacturer and Address* | *Model Number* | *Cubic Feet Per Minute at 1 Inch Water Pressure* | *Cubic Feet Per Minute at Other Pressure Conditions* | | *Cost* | *Comments* |
|---|---|---|---|---|---|---|
| | | | PRESSURE | C.F.M. | | |
| Arrow Industries<br>709 North Euclid Ave<br>Box 222, Station B<br>Dayton 7, Ohio | 500 CD. | | 0 | 78 | $ 60 | Electric motor included at same price for either hand or motor operation. |
| Buffalo Forge Co.<br>490 Broadway<br>Buffalo 5, N. Y. | 1 CD. | 50 | | | $ 72 F.O.B. | Also available in combination manual-electric model. |
| | 3 CD. | | ½" | 375 | $192 F.O.B. | |
| Champion Blower & Forge Co.<br>Lancaster, Pennsylvania | 60A | 60 | | | $ 57 F.O.B. | Also available with electric motor. |
| | 60B | 80 | | | $ 74 F.O.B. | |
| | 60C | 100 | | | $ 90 F.O.B. | |
| Decatur Foundry & Machine Co.<br>P. O. Box 1451<br>Decatur, Alabama | 80M | Over 80 | 5" | 80 | $ 78 | Also available in combination manual-electric model. High efficiency even at high (5") pres. will work even with fairly dirty or clogged filters. |
| National Manufacturing Co.<br>1218 North 22 Street<br>Lincoln, Nebraska | 6116 | | Not given* | 150 | $ 88 P.P. | Also available with electric motor kit. |
| Pine Bush Machine Corp.<br>Pine Bush, New York | None | | Not given* | 150 | $ 30 P.P. | |
| Roots—Connersville Blower<br>C/o St. Louis Compressor Service Co.<br>2647 Washington Street<br>St. Louis 3, Missouri | 22 | 25 | 7" | 25 | $222 F.O.B. | High efficiency even at high (7") pressure—will work even with fairly dirty or clogged filters. |
| | 24 | 50 | 7" | 50 | $236 F.O.B. | |
| Swanson, Inc.<br>607 South Washington St.<br>Owosso, Michigan | 500 CD. | | 0 | 78 | $ 60 | Electric motor included at same price for either hand or motor operation. |
| Western Hardward & Specialty Mfg. Co.<br>3830 North Fratney Street<br>Milwaukee 12, Wisconsin | A10 | | Not given* | About 100 | $ 21 F.O.B. | Does not have intake flange. Usual cost of adding intake flange at local sheet-metal shop—$10. |
| Whitaker Hand Blower<br>3517 Imperial Hiway<br>Lynwood, California | None | | Not given* | 60 | $ 45 F.O.B. | Substantial quantity discounts. |

* When the ability of a blower to move air is not specified in terms of a resistance of 1" of water pressure, it is prudent to assume that if a filter is used, the actual capacity of the blower will be ⅒ to ½ of that listed.

For pipe shelters 60 inches or less in diameter, ventilation at a rate of 50 cubic feet per minute of actual fresh air intake will be quite sufficient for at least six adults.

If a pipe shelter 72 inches in diameter is used, it will be wise to plan on a slightly larger blower with an approximate 75 cubic feet per minute capacity.

It is important that the blower be attached to the intake system in such a way that outside air is sucked into the shelter via the center of the blower. By producing a slight positive pressure in the shelter, radioactive contamination will be kept from seeping into the shelter through cracks that have been overlooked. If there are any cracks, air will blow out through them, rather than in. From the center of the blower, a set of 3 inch vent pipes should lead to the outside of the shelter, making a right angle turn at least 3 feet away to prevent gamma rays, which move in a straight line, from passing through the air in the vent pipe into the shelter proper. Details about blowers are given in table 1.

*Filters.*—The filter should be located at least three feet from the shelter proper. The filter should not be kept in the shelter itself since it may accumulate large quantities of radioactive particles whose gamma rays would pass through the filter casing, injuring the people in the shelter.

The Civil Defense Administration has not to my knowledge set any definite specifications for fallout filters. There are many grades of filter, and it is helpful to have some idea of the effectiveness of each. It must be remembered that most of the danger of radioactive fallout comes from the large and medium sized particles, most of which have a diameter of over 75 micra. Invisible dust may contribute to some extent to the radiation danger, but probably will not contribute enough for any serious illness.

There are some filters on the market which are approximately 99.999 per cent efficient. These filters will take out 100 per cent of the particles which are really dangerous and are even efficient enough to remove 99.97 per cent of particles as small as 0.3 micra. These filters may properly be called "absolute filters." They have one additional advantage. They are efficient enough to remove from the air practically all bacteria and almost all viruses. Accordingly, in the event that an enemy undertakes bacterial warfare, these absolute filters will be helpful, although probably not perfect in protecting the occupants of the shelter. Filters of this sort are made by several manufacturers (table 2) at a fairly reasonable price.

A second type of filter is a modification of the usual air filter found in trucks. This is slightly less efficient but is nevertheless completely adequate for Civil Defense purposes in removing radioactive fallout particles. Its efficiency in terms of the large particles is somewhere in the range of 99 per cent, or perhaps more, and it will also take out most of the small particles. It will not, however, remove bacteria and viruses from the air. These filters are available at a low cost—approximately $16.00—and are therefore excellent buys for the home shelter.

Another filter which might be considered for emergencies in which there is inadequate time to get either of the filters mentioned is the ordinary fiberglass filter used in air-conditioning systems and home furnaces. This type of filter material is usually available at local hardware stores. It is much less efficient than the ones mentioned before but, nevertheless, is efficient enough to be highly useful and lifesaving in many situations in which large amounts of radioactive fallout must be kept out of the air supply. The exact figures as to its efficiency are not available. A rough estimate is 70 per cent for most particles. Its efficiency for the large particles, which are the most dangerous ones, is probably considerably greater.

Finally, for those who are caught at the last moment in a situation in which they have no filter material available, it will be helpful to remember that the radioactive particles are, fundamentally, large and medium size grains of sand which are emitting rays. These grains of sand can be kept away by some relatively simple technics, using materials found right in the home. For example, wet blankets, or wet sheets, hung in front of an entrance, will keep out most, if not all, of the large and medium sized particles of radioactive material. It is important, if such barriers are used, to make sure that they go all the way down to the floor, and are held in firm contact with the floor with some sort of weights placed on a fold.

This type of crude filtration arrangement would be particularly helpful for people who are forced to use long corridors and basement areas in large public buildings. In many cases, these areas could be excellent shelters except for the problem of radioactive dust seeping along the corridor to the area in which persons are staying. This can be prevented while at the same time adequate air can be obtained by using a series of wet sheets or blankets hung in such a way as to keep radioactive dust particles from seeping along to the refuge area.

For shelters outside of the home, either underground or above ground, the best filters are either the absolute or the modified truck type (table 2). There are various possible arrangements for fitting the filter to the shelter proper (fig. 1). One may use a T or a trap arrangement, made by a local sheet metal shop. One or the other of these is recommended since they will minimize certain of the dangers to the occupants of the shelter. If an absolute filter, buried underground, is used a trap in front of it will prevent a heavy rain from flooding and clogging the

TABLE 2

FILTERS

| *Manufacturer* | *Model No.* | *Capacity Cu. Ft. Per Minute* | *Ability to Filter Out Fallout Particles Over 75 Micra* | *Ability to Filter Out Particles Between 1 and 75 Micra* | *Ability to Filter Out Out Bacterial Warfare Agents* | *Type of Fitting* | *Can It Be Buried Underground?* | *Cost Approx.* |
|---|---|---|---|---|---|---|---|---|
| Fram Corp.<br>Providence 16<br>R. I. | FA151-PL | 190 | Virtually 100% | Over 99% | Partial | 3″ thread steel | No | $16 F.O.B. |
| Dollinger Corp.<br>Rochester 3<br>N. Y. | M 1 | Information not given | Excellent | Information not given | Information not given | 3″ thread steel | No | $32 P.P. |
| Flanders Filter, Inc.<br>P. O. Box 718<br>Riverhead, N. J. | X | 30 | Complete | Complete | All bacteria, probably all virus | 4″ plain steel | Yes | $51 F.O.B. |
| Cambridge Filter Co.<br>P. O. Box 1255<br>Syracuse 1, N. Y. | Details not available—write to manufacturer | | | | All bacteria, probably all virus | | | |
| Purolator Products, Inc.<br>970 New Brunswick Ave.<br>Rahway, N. J. | | 190 | Virtually 100% | Over 99% | Partial | 3″ thread steel | No | $16 F.O.B. |
| Mine Safety Appliances<br>201 N. Braddock Ave.<br>Pittsburgh, Pa. | Details not available—write to manufacturer | | | | All bacteria, probably all virus | | | |

filter. If a truck-type filter sticks up out of the ground, there is the possibility that a blast wave, coming from a bomb detonation within a 10 mile radius, would blow it off the pipe. In that case, the trap underneath would prevent large radioactive particles from seeping into the shelter. Although the protection would diminish greatly, enough would probably remain to prevent death.

In general, the connections between filter, intake-pipe and blower should be made of 3 inch internal diameter steel pipe. Either the ordinary 24 inch long sections of vent pipe, as sold in local hardware stores, Sears, Roebuck or Montgomery Ward may be used or, if available, flexible steel pipe of the sort used in truck exhaust systems.

The air exhaust system also uses 3 inch diameter pipes. No blower is attached. The pipes of the exhaust system must also make a right-angle bend at least two feet outside the shelter and rise to a height of one foot above the ground. Instead of an ordinary flue cap, a special vent flue cap should be attached to the top of the exhaust pipe. When the wind blows these devices exert suction on the exhaust system; therefore, the hand operated blower need be used less. With a wind velocity of 12 to 14 miles per hour, one of these vent flue caps can exhaust enough stale air from the shelter to make the use of the blower unnecessary. They cost only about $5.00 each (table 3). Of course, a vent flue cap must not be put on both ventilation pipes, only on the exhaust pipe.

The outside 3 inch vent pipes sticking out of the ground can be made either of galvanized sheet steel or of heavy plumbing steel pipe. If blast protection is desired, heavy 3 inch water pipe is needed. This pipe is quite expensive. A reasonable compromise would be to use the sheet steel pipe underground, connected to the heavy steel at a point about three feet below the surface. From this point, the strong pipe rises above ground. It can resist considerable blast pressure.

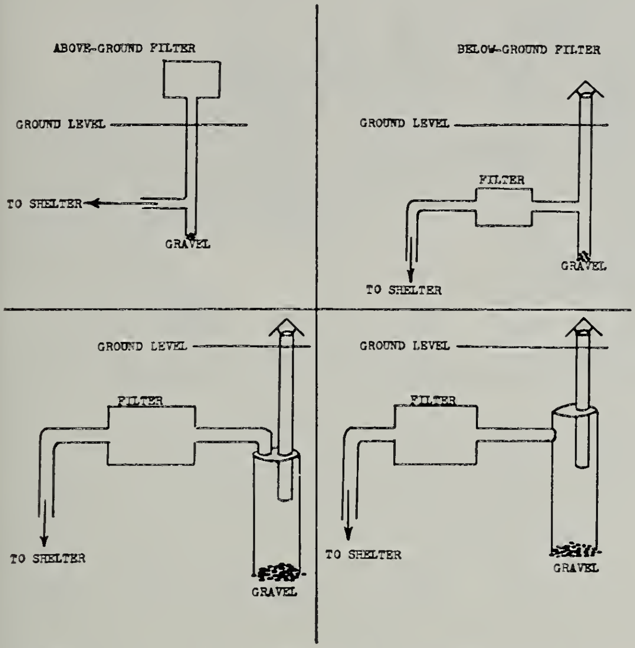


**Fig. 1. Various arrangements for fitting the filter to the shelter.**

TABLE 3
VENT FLUE CAPS

| *Manufacturer* | *Model No.* | *Type of Fitting* | *Cost* |
|---|---|---|---|
| G. C. Breidert Co. | 4" Size A | 3½" I.D. Smooth neck | $5 F.O.B. |
| P. O. Box 1190 San Fernando, Calif. | 3 SL | 3" pipe thread | $17 F.O.B. |
| Penn Ventilator Co. Philadelphia 40, Pa. | CD 4 | 3" pipe thread | $15 prepaid |

Within the shelter, the intake and exhaust pipes should be at opposite ends of the shelter. This will increase the efficiency of the ventilating system. The openings of both intake and exhaust pipes should be directed away from each other to increase ventilation efficiency.

There has been considerable discussion of the possibility that an enemy might use war gases. This seems rather unlikely, not because of any humanitarian considerations, but simply because war gases are far less effective than hydrogen bombs, in terms of the amount which must be carried by a single plane or missile to knock out a particular area. However, the possibility of their use cannot be ruled out. This will be considered in a later chapter.

# Comparison of Different Shelters

Since there are many kinds of bomb shelters it may be difficult for some people to decide which is the best for a particular situation. In this article, the characteristics of many shelters are summarized and compared. The weights are given to furnish a guide as to the amount of settling which might be expected if these shelters are placed in a basement. Also, the weight gives a rough idea of the amount of work needed. The estimates of cost of materials and probable range of contractor's fees are approximations only. There will be variations in cost in different parts of the country and even between different homes on the same street. For example, if a home is situated on a steep slope up which concrete must be taken by wheelbarrow the contractor's costs would be higher than if the house were next to a level road, allowing a portable concrete mixer to discharge concrete directly into the forms.

A particular structure may give a certain degree of protection against radiation, simply by virtue of the way in which it is constructed. When a structure of that nature is incorporated into another structure, the degree of protection afforded may, under certain circumstances, be a product of the protection afforded by each. This is the case in some basement shelters. Therefore, a relatively thin walled (eight inch) shelter, which would have a protection factor of about 1:12 if it were above ground, will have its own inherent protection factor, multiplied by the protection factor involved in being in the basement of an existing structure. Thus the total effective protection factor would be approximately 100.

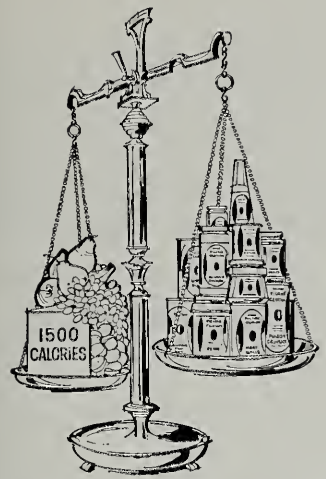
Details are given in table 1.

*(Continued on page 786)*

TABLE 1

COMPARISON OF DIFFERENT SHELTERS—GENERAL

| *Shelter Type* | *Fallout Protection* | *Fallout Radiation Reduction* | *Adaptability for Protection Against Fire and Firestorm* | *Blast Protection* | *Adaptability Against Chemical and Biological Warfare* | *Ventilation Efficiency* | *Weight (lbs.)* | *Comfort* | *Estimated Cost of Materials* | *Probable Range of Contractor's Fees* | *Probable Cost Range Per Person Including Contractor's Fees* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Basement—OCDM concrete block—8" thick | Good | 1/100 | None | None | None | Fair | 20,000 | Excellent | $300 | $300 to $600 | $120 to $180 |
| Basement—sandbags 18" thick walls and roof | Good | 1/400 | None | None | None | Fair | 22,000 | Excellent | $175 | $500 to $750 | $140 to $185 |
| Basement—sandbags 36" thick walls and roof | Excellent | Over 1/1,000 | None | None | None | Fair | 45,000 | Excellent | $200 | $700 to $1,500 | $180 to $340 |
| Basement, concrete block, 16" thick | Excellent | 1/1,000 | None | None | None | Fair | 40,000 | Excellent | $500 | $400 to $1,000 | $180 to $300 |
| Basement, crushed rock between joists with walls of crushed rock between supports (10" wide) | Good | 1/100 | None | None | None | Fair | 20,000 | Excellent | $60 | $250 to $500 | $62 to $110 |
| Underground—poured concrete—8" walls, 6" ceiling covered with 2' 3" of earth | Excellent | 1/1,000 | Possible | Slight | Possible | Fair | 75,000 | Excellent | $400 | $2,000 to $3,000 | $480 to $680 |
| Under garage—poured concrete—8" walls, 20" roof | Excellent | 1/1,000 | None | Slight | Possible | Fair | 70,000 | Excellent | $400 | $2,000 to $3,500 | $480 to $780 |
| Above-ground, double wall | Excellent | 1/1,000 | None | None | None | Fair | 175,000 | Excellent | $700 | $1,500 to $2,500 | $440 to $640 |
| Corrugated steel pipe—5'-7' diam. —1 family, covered with 5' of earth | Excellent | Over 1/10,000 | Yes | Excellent | Yes | Very good | 2,000 to 3,000 (steel) | Fair | $700 | $150 to $300 | $170 to $200 |
| Neighborhood—corrugated steel pipe, 7' diam., covered with 5' of earth | Excellent | Over 1/10,000 | Yes | Excellent | Yes | Very good | . . . | Fair | . . | . . | $100 to $150 |
| Neighborhood—cavern blasted into rock formation—Missouri style | Excellent | Over 1/100,000 | Yes | Excellent | Yes | Very good | . . . . | Excellent | . . . . | . . | $30 to $100 |



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| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Apple-Grape Drink | ½ cup | 20 | 52 |
| Five-Fruit Juice Breakfast Drink | ½ cup | 20 | 52 |
| Braised Beef and Vegetables | 6½ oz. | 184 | 380 |
| Meat Balls in Brown Gravy | 3½ oz. | 84 | 280 |
| Chopped Chicken Livers | 1 oz. | 31 | 100 |
| Chicken a la King | 3 oz. | 72 | 230 |
| French Style Dressing | 1 tbsp. | 10½ | 60 |
| Brown Gravy | 1 tbsp. | 7 | 21 |

| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Applesauce | ½ cup | 48 | 90 |
| Fruit Cocktail | ½ cup | 44 | 90 |
| Cherry Pie Filling | 1 oz. | 20 | 60 |
| Chocolate Topping | 1 tbsp. | 8 | 63 |
| Preserves (Peach, Strawberry) | 1 tbsp. | 9 | 55 |
| "Maplette" Syrup | 1 tbsp. | 9 | 55 |
| Liquid or Powder Sweetener | (to equal 1 tbsp. of sugar) | 0 | 16 |

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Donald M. Dowell, M.D.

# President's Message

Today there are AMPAC, MMPAC and any number of smaller local and community groups working toward the candidacy of certain candidates and certainly there can be no member of the medical profession today unaware of the importance of legislation—be he for or against it.

So much attention has been centered in the Washington scene that it might be easy to feel that the important activity should center on the November elections when the personnel in the U. S. Congress might be changed. Some of the possibilities of being able to vote for the person of one's choice in the November election will depend on the primary elections to be held this month. This not only applies to the selection for candidates for the U. S. Congress, but for state and local offices which also are of great importance.

Therefore it is my hope that while members take an active part in the organizations that try to influence the election of fair and just candidates, they will not forget that there is that personal responsibility that cannot be a part of any organization—the individual must go to the polls himself in the August primaries and cast his ballot. No organization, no matter how strong, can take the place of this personal responsibility.

D. M. Dowell, M.D.

# EDITORIAL

## PHYSICIANS NEED TO KNOW MORE ABOUT MEDICAL TECHNOLOGISTS

There are medical technicians "MT" and there are medical technologists "MT(ASCP)" and to know the difference is of considerable value to the patient, the physician and the hospital. The MT(ASCP) has the professional significance among technologists as does the R.N. in the nursing profession. The medical technologists who use the professional designation MT(ASCP) have had two years (now three years) of college with a basic background of science, plus an additional year of clinical training in a hospital school of medical technology headed by a pathologist and approved by the American Medical Association. They have passed national boards given by the Registry of Medical Technologists of the American Society of Clinical Pathologists in Muncie, Indiana.

The designation MT is awarded commercial school graduates and others by a self constituted agency, the American Medical Technologists, the AMT, which operates out of Enid, Oklahoma, and is not listed among national accrediting agencies by the United States Office of Education. Commercial or private schools are not accredited by the usual accrediting bodies for academic institutions nor are they recognized by such professional organizations as the American Hospital Association, the Catholic Hospital Association, the American Medical Association or the American Society of Clinical Pathologists.

In a documental article in the journal, *Modern Hospital,* December 1961 issue, on "Commercial Medical Technology Schools" it is pointed out that these schools, although mainly in cities, draw students largely from rural areas. Tuition ranges up to $1,395.00 cash, the article states, and may have as many as 40 students per instructor as compared to two per instructor in A.M.A. approved schools. While high school graduation or its equivalent is usually claimed as the entrance requirement, the equivalent can mean, according to the article "that the student has enough money."

The A.M.A. approved schools generally do not charge tuition unless the course is given by a university and is part of a program leading to an academic degree.

If you, as physicians, are called upon to counsel high school students in regard to the field of medical technology or if you are hiring someone for your office or in your hospital laboratory, inform yourself of the significance of the school and the training that is available to the prospective student and/or graduate.

Remember "MT(ASCP)" means professional training and "MT" means commercial training or its equivalent.

T. J. Cooper, M.D.

## VOLUNTARY HEALTH INSURANCE CONTINUES GROWTH

Report of a survey of the extent of voluntary health insurance coverage in the United States based on reports from insurance companies, Blue Cross-Blue Shield and other health care plans was released by the Health Insurance Council late in June.

The survey showed that more than 135 million Americans—74 per cent of the civilian population—had some form of health insurance at the end of 1961. Coverage increased 3.1 million during 1961 to reach a total of 135,042,000.

Benefit payments by all health insuring organizations to help cover the cost of hospital, surgical and medical care amounted in 1961 to more than $5.4 billion, up $600 million over 1960. In addition, persons with loss-of-income policies received $855 million in benefits from insurance companies to replace income lost through disability. Thus a grand total of $6,329,000,000 in health insurance benefits were distributed during 1961, up 11.3 per cent over 1960.

The HIC, a federation of eight insurance associations, said that based on early trends for 1962, it estimates that as of June 1, 1962, some 136 million persons had hospital expense insurance, 126 million had surgical expense insurance, 94 million had regular medical expense insurance, 36 million had major medical expense insurance and 43.5 million were insured against loss of income, or had some other formal sick leave pay arrangement.

# Ramblings of the Field Secretary

Approximately 50 physicians in addition to staff members from the University of Missouri Medical School attended the 7th Annual Spring Clinical Conference held at the University of Missouri Medical Center on May 9 and 10. The subject for the conference was "Newer Developments in Cancer." Speakers who appeared on the program included members of the medical school faculty and a number from out of state. This program is acceptable for 10¾ hours of Category I Credit by the American Academy of General Practice.

Some of the Academy members in attendance were Drs. Allen, Glover, Huckstep, Pearse, Vitali, Hall and Campbell.

A meeting to discuss oral polio vaccine was held on Sunday, May 6, at the Chase Hotel in St. Louis. Members of the Infant and Child Care Committee of the Missouri State Medical Association, representatives of the Missouri Academy of General Practice, the Missouri Academy of Pediatricians, the St. Louis County Health Department, the St. Louis City Health Department, the Kansas City Health Department and the Missouri Division of Health participated.

Dr. Hardwicke and his polio advisory group.

The purpose of the meeting was to formulate some general recommendations for the guidance of physicians, health officers and others in the State of Missouri relative to the present use of oral polio vaccine. It was finally agreed that Salk vaccine should be emphasized as the main line of defense against polio at this time with a recommendation that oral polio vaccine not be used at this time except in special situations.

More than 300 people attended a medical forum on "Medical Care for the Aged," cosponsored by the St. Louis Medical Society, the *Globe-Democrat* and KMOX radio station, held at the St. Louis Medical Society auditorium, Monday night, May 7. The program moderator

The panel members were Mr. Salamone, Dr. Repetto, Mr. Hornback, Representative Curtis and Mr. Rex Davis.

More than 300 people attended the forum.

(Continued on page 810)

**Emotional control regained...a family restored... thanks to a doctor and 'Thorazine'**

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# Missouri Medical News

Recently appointed college physician at Christian College, Columbia, is **Clarence M. Pickard**, M.D., Columbia.

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One of 20 alumni from seven states receiving an "Alumni Citation of Useful Citizen" from the University of Chicago at ceremonies on June 9 was **C. Souter Smith**, M.D., Springfield.

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Among featured speakers at the South Central Regional meeting of the National Association for Retarded Children held in Kansas City in June was **George A. Ulett**, M.D., Jefferson City.

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Recipient of the Medical Fund Society prize in surgery from Washington University School of Medicine in June was Raymond A. Ritter Jr., son of Dr. and Mrs. **Raymond A. Ritter**, Cape Girardeau.

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The Independence Hospital Nurses Alumni honored **Charles F. Grabske**, M.D., Independence, at a dinner in Independence on June 1.

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The staff of the Albert M. Keller Memorial Hospital, under construction at Fayette, elected **W. A. Bloom**, M.D., as the first chief of staff. **William J. Shaw Sr.**, M.D., was elected assistant chief of staff and **M. P. Leech**, M.D., was elected secretary-treasurer. All are from Fayette.

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The St. Louis College of Pharmacy presented its "Physician of the Year" award to **William H. Olmsted**, M.D., St. Louis.

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Various approaches of providing medical care for the aged were discussed by **H. E. Petersen**, M.D., St. Joseph, before a recent meeting of the St. Joseph Lion's Club.

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The medical staff of St. Anthony's Hospital, St. Louis, has elected **Louis T. Litzow**, M.D., St. Louis, as president. **Robert Brennan**, M.D., was elected secretary, and **D. E. Beckman**, M.D., treasurer.

Recipient of a special Kiwanis International Distinguished Service Award this spring was **Leo A. Bruce**, M.D., Sikeston.

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Speaking on the subject of retarded children, **Cecil G. Leitch**, M.D., Blue Springs, spoke at a meeting of the PTA of the Young School in Independence.

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A new building at State Hospital No. 4, Farmington, was named for **Emmett F. Hoctor**, M.D., Farmington, superintendent of the hospital for 36 years.

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Certificates in recognition of 50 or more years of service on the staff of Missouri Baptist Hospital, St. Louis, were recently given Drs. **M. E. Sheets**, **C. E. Burford**, **J. C. Landree**, **Hudson Talbott** and **J. S. Sheets**.

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The American Urological Association at its annual meeting installed **Grayson Carroll**, M.D., St. Louis, as its president.

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Recently elected president of the American Association of Plastic Surgeons is **Frank McDowell**, M.D., St. Louis.

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Recently certified by the American Board of Obstetrics and Gynecology were Drs. **Nicholas A. Correnti**, Jennings; **Frederick W. Martin**, Clayton; **Theodore Merrims** and **Eugene D. Taylor**, St. Louis, and **Alexander M. Roter**, St. Charles.

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The American College of Obstetricians and Gynecologists have elected **A. N. Arneson**, M.D., St. Louis, as treasurer. Section Chairman for Missouri is **Kenneth S. Nicolay**, M.D., Kansas City, and vice chairman is **William B. See**, M.D., Columbia.

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Speaking before the 9th Councilor District at Huntsville, Ark., on June 1, **Ross B. Sommer**, M.D., St. Louis, discussed "What's New in Allergy" and "Laboratory Developments in Internal Medicine."

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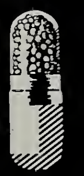

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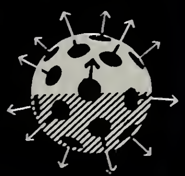

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Mount Prospect, Illinois.

At a spring meeting of the Society of Anesthesiologists in Pittsburgh, Pa., **Seymour Brown**, M.D., discussed "Anesthesiological Management of the Diabetic Surgical Patient."

The first recipient of the Abraham Jacobi award in pediatrics, consisting of a certificate and $1,000 was presented during the AMA session to **Alexis F. Hartmann**, M.D., St. Louis.

The Mid-West Association of Plastic Surgeons elected **James F. Dowd**, M.D., St. Louis, president-elect at its meeting in Minneapolis.

# New Members

**Robert E. Baker**, M.D., 1319 Grant Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Baker is a native of Texas, received his preliminary education at Baylor University, and his M.D. degree at the University of Texas in 1958.

**John F. Carter**, M.D., 15 Friese Drive, St. Louis, has become a member of St. Louis Medical Society. Dr. Carter is a native of New York, received his preliminary education at Loyola University, and his M.D. degree at St. Louis University in 1956.

**Daniel L. Dolan**, M.D., 609 Cherry St., Springfield, has become a member of Greene County Medical Society. Dr. Dolan is a native of Kansas, received his preliminary education at Vanderbilt University, and his M.D. degree at Vanderbilt University in 1955.

**Kenneth W. Gentsch**, M.D., 3249 Sulphur Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Kentsch is a native of Illinois, received his preliminary education at Princeton University, and his M.D. degree at Washington University in 1958.

**James L. Hickey**, M.D., 4931 Parkview Place, St. Louis, has become a member of St. Louis Medical Society. Dr. Gentsch is a native of Illinois, received his preliminary education at Spring Hill College, and his M.D. degree at St. Louis University in 1955.

**George A. Johnson**, M.D., 2734 Luster St., Springfield, has become a member of Greene County Medical Society. Dr. Johnson is a native of Nebraska, received his preliminary education at Drury College, and his M.D. degree at Baylor University in 1956.

**Edna M. Jones**, M.D., Rt. 1, Clinton, has become a member of Henry County Medical Society. Dr. Jones is a native of Missouri, received her preliminary education at Phillips and Missouri universities, and her M.D. degree at Kansas University in 1929.

**James J. Litsey II**, M.D., 4617 Shenandoah Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Litsey is a native of Illinois, received his preliminary education at Cornell University, and his M.D. degree at Nationale University of Mexico in 1959.

**James F. McCool Jr.**, M.D., 1356 McCutcheon Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. McCool is a native of Pennsylvania, received his preliminary education at Washington and Jefferson College, and his M.D. degree at St. Louis University in 1958.

**Paul N. Meiners**, M.D., 6167 Washington Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Meiners is a native of Missouri, received his preliminary education at Missouri and St. Louis Universities, and his M.D. degree at St. Louis University in 1957.

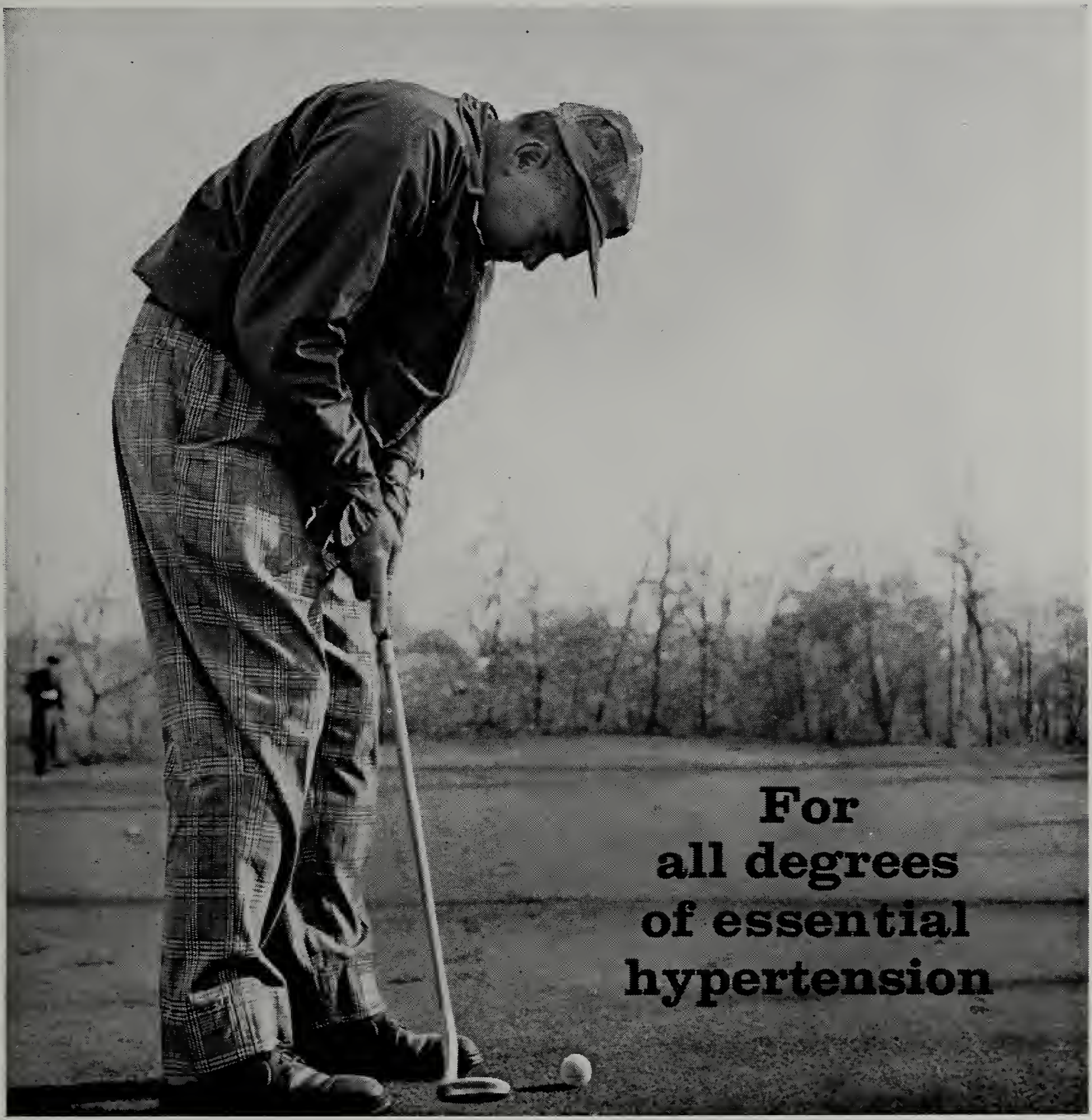
**Edward C. Meyer**, M.D., 7434 Stratford Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Meyer is a native of New Jersey, received his preliminary education at Princeton University, and his M.D. degree at Yale University in 1956.

**Marvin R. Mishkin**, M.D., 721 Westwood Drive, St. Louis, has become a member of St. Louis Medical Society. Dr. Mishkin is a native of Illinois, received his preliminary education at Roosevelt University and the University of Illinois, and his M.D. degree at the University of Illinois in 1955.

**Franklin L. Mitchell**, M.D., 810 Greenwood Court, Columbia, has become a member of Boone County Medical Society. Dr. Mitchell is a native of Missouri, received his preliminary education at the University of Missouri, and his M.D. degree at Johns Hopkins University in 1955.

**Arlen Morrison**, M.D., 3946 Lee Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Morrison is a native of Illinois, received his preliminary education at Washington University and his M.D. degree at Washington University in 1958.

**William L. Phelps**, M.D., 5455 Delmar Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Phelps is a native of Illinois, received his preliminary education at Southern Illinois University, and his M.D. degree at the University of Illinois in 1958.



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[†]Hutchison J. C.: Current Therap. Res. *2*:487 (Oct.) 1960.

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**Guido I. Podrecca**, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Podrecca is a native of New York, received his preliminary education at Liceo Cavour, Rome, Italy, and his M.D. degree at the University of Rome in 1947.

**William R. Richards**, M.D., 876 Providence Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Richards is a native of Illinois, received his preliminary education at the University of Illinois, and his M.D. degree at Washington University in 1957.

**George H. Rodgers**, M.D., Kansas City General Hospital, Kansas City, has become a member of Jackson County Medical Society. Dr. Rodgers is a native of Missouri, received his preliminary education at the University of Missouri, and his M.D. degree at the University of Colorado in 1952.

**Glennon S. Schaefer Jr.**, M.D., 8514 Antler Drive, St. Louis, has become a member of St. Louis Medical Society. Dr. Schaefer is a native of Illinois, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1955.

**Charles R. Schranck**, M.D., 9371 W. Pine Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Schranck is a native of Missouri, received his preliminary education at the University of Missouri and Creighton University, and his M.D. degree at Creighton University in 1957.

**Wallace B. Smith**, M.D., 10901 Winner Road, Independence, has become a member of Jackson County Medical Society. Dr. Smith is a native of Missouri, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1954.

**Robert E. Stuffelbam**, M.D., 1108 Porter Ave., Columbia, has become a member of Boone County Medical Society. Dr. Stuffelbam is a native of Missouri, received his preliminary education at Westminster College, and his M.D. degree at St. Louis University in 1958.

**Thomas L. Tombridge**, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Tombridge is a native of Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1954.

**Terry E. Tracy**, M.D., 416 Main St., Belton, has become a member of West Central Missouri Medical Society. Dr. Tracy is a native of Kansas, received his preliminary education at the University of Kansas, and his M.D. degree at Missouri University in 1961.

**W. Yates Trotter**, M.D., 910 E. University St., Springfield, has become a member of Greene County Medical Society. Dr. Trotter is a native of Arkansas, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1955.

**Wayne A. Viers**, M.D., 135 W. Adams St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Viers is a native of Oklahoma, received his preliminary education at Phillips University, and his M.D. degree at the University of Oklahoma in 1956.

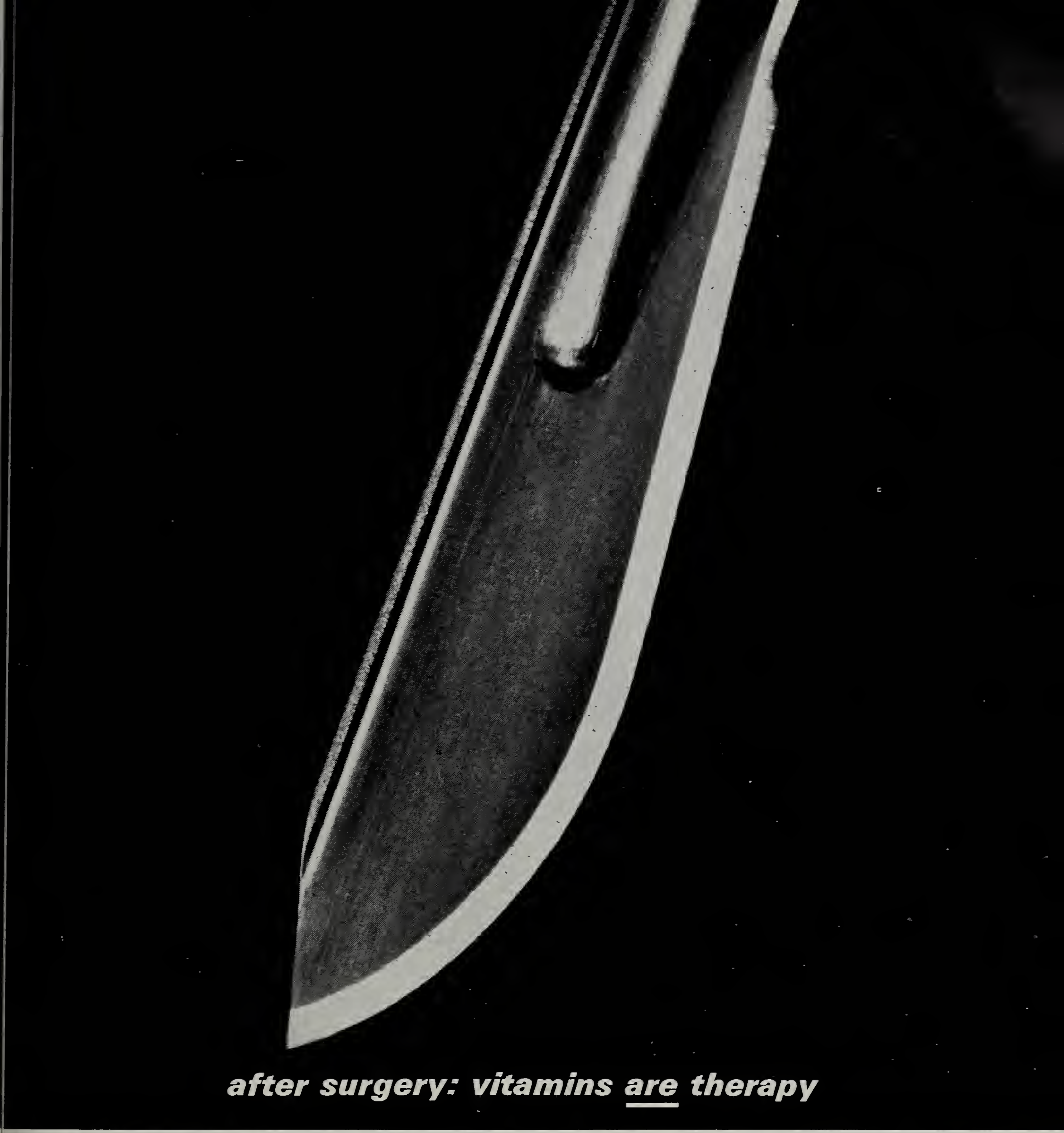
**T. Thomas Warren**, M.D., 115 S. Wood Ave., Fredericktown, has become a member of Mineral Area Medical Society. Dr. Warren is a native of Missouri, received his preliminary education at Southeast Missouri State University, and his M.D. degree at Missouri University in 1960.

**Earl J. Wipfler Jr.**, M.D., 400 Leslie Court, Columbia, has become a member of Boone County Medical Society. Dr. Wipfler is a native of Missouri, received his preliminary education at Washington University, and his M.D. degree at Missouri University in 1955.

**Edward Wolfe**, M.D., 5525 Enright Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Wolfe is a native of New York, received his preliminary education at Hobart College, and his M.D. degree at Washington University in 1960.

**Parker H. Word**, M.D., 4743 Easton Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Word is a native of Virginia, received his preliminary education at Virginia State University, and his M.D. degree at Howard University in 1944.

**Robert L. Zahn**, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Zahn is a native of Missouri, received his preliminary education at Missouri Valley College, and his M.D. degree at George Washington University in 1957.



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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Buchanan County Medical Society

Seventy physicians and dentists attended the tenth annual joint meeting of the Buchanan County Medical Society and the Northwest Missouri District Dental Society. Presiding jointly at the dinner and meeting, in the Empire Room of Hotel Robidoux, on May 2, were Dr. John R. Forgrave, Medical Society president, and Dr. William C. McCoy, Chillicothe, president of the dental society.

The program was a symposium on "The Present Status of Fluoridation." Participating were Drs. H. E. Petersen and F. Gregg Thompson III, from the medical profession; Drs. Anthony L. Ingino and Larry Jones, from the dental profession; and Mr. G. E. Boulton, manager of the St. Joseph Water Company. A question and answer session followed the presentation by the panelists. Consensus was that fluoridation of the municipal water supply would be highly desirable but the best means to bring it about would be by instigation of lay groups assisted by the medical and dental professions.

Herbert C. Senne, M.D., *Secretary*

### Meeting of June 6

Vernon E. Wilson, M.D., Columbia, Dean and Director of Missouri University Medical Center, was the speaker at the June 6 meeting of the Buchanan County Medical Society. He discussed the operations of the University Medical Center. Dr. Wilson's appearance in St. Joseph was sponsored by the Northwest Missouri Chapter of the Missouri Academy of General Practice.

Dr. John R. Forgrave presided at the dinner and program in the Empire Room of Hotel Robidoux. Dr. Wilson was introduced by Dr. Gilbert Kelley of Savannah. Forty-seven St. Joseph and Northwest Missouri doctors attended the dinner and meeting.

In his talk, Dr. Wilson emphasized that the prime goal of the Medical Center was to educate new doctors and that all other programs were secondary to this. Research, he explained was important but was in proportion to the primary aim of producing as many qualified M.D.'s and health personnel as possible. Dr. Wilson explained the operations of the Medical Center and answered numerous questions following his talk.

At the Society's business session, the members unanimously voted against the use in St. Joseph of Sabin oral polio vaccine unless it be used for mass immunization to prevent an epidemic. The action concurred with recommendations by the Missouri Department of Health and the U. S. Public Health Service.

Herbert C. Senne, M.D., *Secretary*

### Grand River Medical Society

Members of the Society, Auxiliary and guests met at the Strand Hotel in Chillicothe, May 10. Dr. George Gary, vice president, presided in the absence of Dr. Ralph Bohnsack, president.

Following a social hour and dinner separate meetings were held. The Auxiliary was entertained by slides of the Hawaiian Isles by Mrs. Gary and Slides of Europe by Mrs. Dowell. A surprise dessert was served by Mrs. Smith, the retiring president.

The doctors had an interesting speaker in Walton C. Ingham, M.D., surgeon, Kansas City, whose topic was "Gallbladder Disease."

During the business session the following items were decided by a majority vote:

The annual golf meeting will not be held this year. A lawyer will be secured as speaker for the June meeting and members will invite the lawyers in their own localities to attend the meeting in addition to the local druggists.

To the November meeting the members of the State Legislature, from our counties, are to be invited.

Guests present were Walton C. Ingham, M.D., and Mrs. Ingham, Kansas City; Mr. Wayne McCarthy, Mr. Neal Dillon and Mr. Bill Brown of Gerber Baby Foods.

Frank R. Daley, M.D., *Secretary*

## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### Chariton-Macon-Monroe-Randolph County Medical Society

The Chariton-Macon-Monroe-Randolph County Medical Society held a regular monthly dinner meeting at the Woodland Hospital in Moberly on Thursday night, May 10. Seymour Brown, M.D., assistant professor of anesthesiology, St. Louis University Medical School, and chief of anesthesia at St. John's and St. Louis County hospitals, presented the scientific program. His

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subject was "Office Anesthesia, Complications and Treatment." In his discussion he placed considerable emphasis upon artificial respiration. He also demonstrated different types of resuscitating apparatus. A number of different types of local anesthesia were discussed with the advantages and disadvanges of the use of each one being pointed out.

Members present included: Drs. A. P. Rowlette, J. Will Fleming Jr., Robert Hasson, Thomas S. Fleming, C. C. Cohrs, W. D. Chute, Josephine Baker, C. C. Smith, S. R. Szymanski, R. H. Young, L. E. Huber, Moberly; P. V. Dreyer, Huntsville; F. L. Harms, Salisbury; F. A. Barnett, Paris; James E. Campbell, Carl Rinker, Howard Miller and D. E. Eggleston, Macon.

In addition to the speakers, two additional guests were present, namely: Drs. Leopold Lachance, Centralia, and Roger Bumgarner, Columbia.

J. Will Fleming Jr., M.D., *Secretary*

## FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Jefferson County Medical Society

The Jefferson County Medical Society met May 29 at 8:00 p.m. at Jefferson Memorial Hospital Cafeteria with the following doctors present: Drs. W. T. Judge, K. V. McKinstry, H. Yoskit, J. F. Rutledge, T. A. Donnell, C. E. Rice, C. Fallet, R. H. Donnell, H. E. Donnell and F. L. Kozal.

A brief meeting was held to affirm the society's endorsement of full support to the proposed Jefferson Memorial Hospital expansion fund drive. This passed unanimously.

Following the business meeting Dr. Clement J. Sullivan, St. Louis, presented a comprehensive and well illustrated program on "Allergies." A long question and answer period followed, during which refreshments provided by the hospital kitchen staff were served.

F. L. Kozal, M.D., *Secretary*

## SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

### Henry, Johnson, Pettis, Saline County Medical Societies

By invitation of the 805th Medical Group, U. S. Air Force, Whiteman Air Force Base, a joint dinner meeting of the Henry, Johnson, Pettis, Saline and adjacent county medical societies and the doctors' wives was held at the base on Wednesday night, May 16. This signal affair took place at the Officers' Club and offered an evening of unusual pleasantries. One hundred twenty-five people including doctors, their wives and medical personnel of the air force base were present. The evening festivities began with a social hour at 6:00 p.m. followed by an excellent dinner and then a most interesting program.

Colonel Campbell was the speaker.

J. D. McGeary, Lt. Col., USAF MC, Commander of the air force base hospital, opened the formal program by expressing the pleasure of the personnel of the Whiteman Air Force Base Hospital in having the civilian doctors and their wives present. He extended a most cordial welcome to all present. He then introduced a number of his staff and requested Dr. Kenneth Hollweg, of Kansas City, President-Elect of the Missouri State Medical Association, to make a few remarks after introducing Dr. and Mrs. Hollweg. The featured speaker for the evening was Col. Paul A. Campbell, Commander, School of Aerospace Medicine, Brooks AFB, Texas, who used as his subject, "Man in Space." His

President-Elect Hollweg of MSMA was present, third from left.

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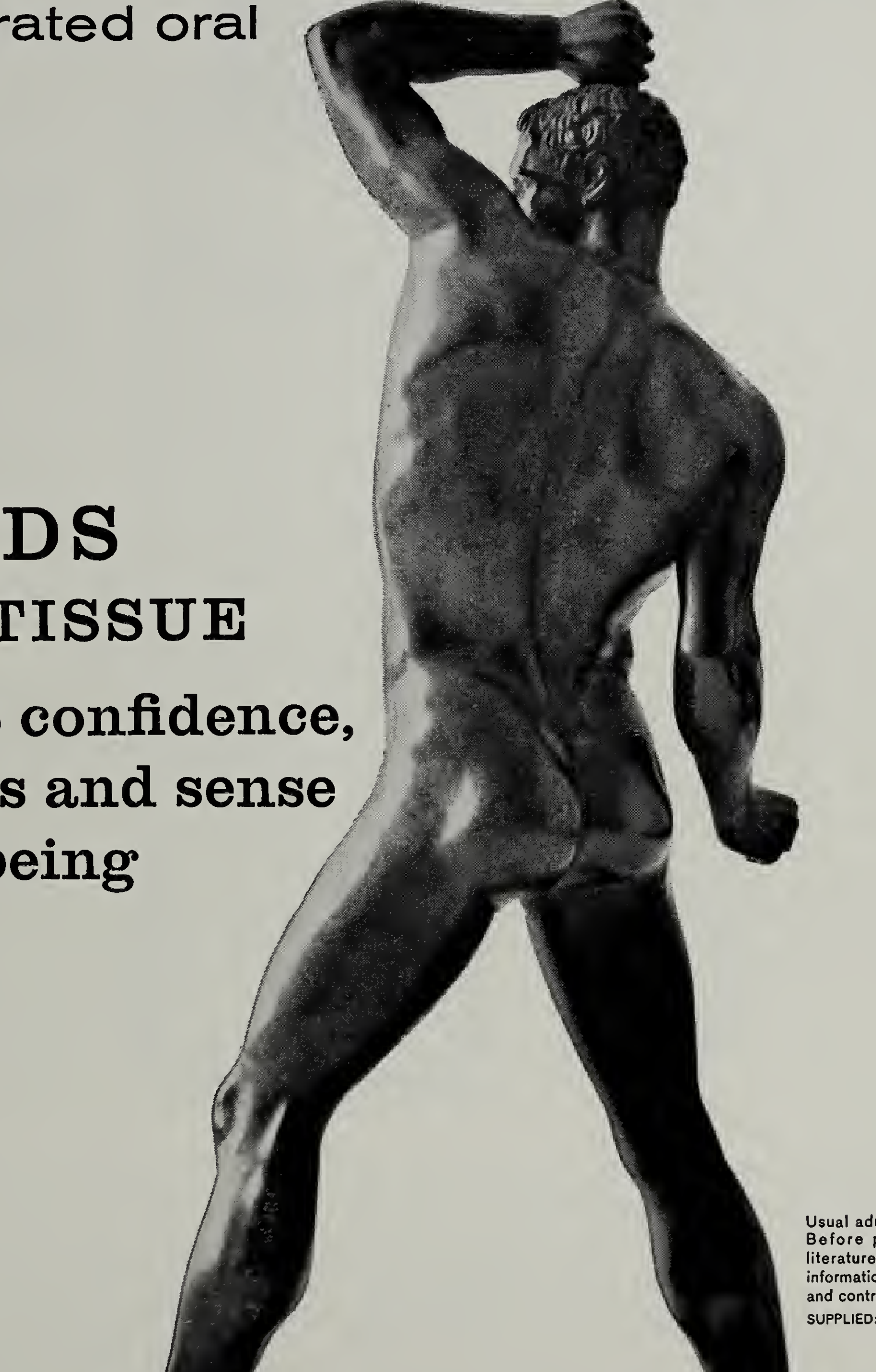

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interesting discussion was illustrated by an excellent set of slides which were quite helpful in following his presentation.

We are indebted to the base hospital group for their hospitality on this occasion and particularly for the securing of Col. Campbell as our speaker.

O. B. Barger, M.D., *Councilor*

### West Central Missouri Medical Society

The May meeting of the West Central Missouri Medical Society was held Thursday evening, May 10, at Glenn's Cafe in Butler. The usual social hour preceded the fine steak dinner.

Following the dinner a short business session was held. The minutes of the last meeting were read and approved. The secretary presented the application of Dr. Terry A. Tracy, Belton, for membership. Dr. Tracy is the son of Dr. and Mrs. H. A. Tracy, Belton. He is at present serving his internship in Wesley Hospital, Wichita, Kansas, and after completion, on the first of July, will join his father in general practice at Belton. His application had been previously approved by the Credentials Committee.

President Don Giesler presented Dr. Earl Brown, Kansas City, who acted as moderator for a panel sent by the Maternal Welfare Committee of the State Association for a discussion of maternal deaths and the work of the Committee for the western half of the state. He made a few remarks as regards the workings of this Committee and in turn introduced Dr. Frank Mantz of the University of Kansas Medical Center and Dr. Robert Slickman, Kansas City. Each made remarks in regard to their part in the Committee work and then presented a case of maternal death with history, findings and course of treatment. This was followed by open discussion by the members present. This proved to be a fine program. We are indebted to these men for an excellent presentation and welcome them back again for a similar program.

Those present were Dr. and Mrs. Don Giesler, Osceola; Dr. and Mrs. Robert Brownsberger and Dr. and Mrs. William Ellett, Appleton City; Dr. and Mrs. O. B. Barger, Harrisonville; Dr. and Mrs. H. A. Tracy, Belton; Dr. and Mrs. Robert Magee, Eldorado Springs; Dr. and Mrs. Rolla Wray, Dr. and Mrs. F. L. Martin, Dr. Roy Pearse and Dr. L. P. McCann, Nevada; Dr. and Mrs. B. O. Hartwell, Drexel; Dr. C. A. Lusk Jr., Dr. and Mrs. A. L. Hansen, Dr. and Mrs. C. W. Luter, Dr. and Mrs. R. E. Baska, Butler.

This was a good attendance for which the host members were most grateful. The next meeting will be in Nevada at which time the lawyers and the doctors hold their annual meeting together with a legal-medical program.

It was voted that the October meeting would be held in Eldorado Springs.

No further business appearing on the agenda the meeting was adjourned.

Carter W. Luter, M.D., *Secretary*

## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid Missouri County Medical Society

A dinner meeting of the Mid Missouri County Medical Society and the doctors' wives was held at the Munger-Moss Cafe in Lebanon on Thursday night, May 24. The evening festivities began with a social hour followed by dinner and then an interesting program presented by the Department of Clinical Psychiatry, University of Missouri School of Medicine.

Dr. Robert E. Froelich from the department discussed "The Chronic Somatic Complainer." Dr. Jacob O. Sines presented cases illustrating this type of patient.

M. K. Underwood, M.D., *Secretary*

## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Mineral Area County Medical Society

A meeting of the Mineral Area County Medical Society was held Thursday evening, May 24, in the Clinic Building of the State Hospital at Farmington. The program for the evening, sponsored by the Missouri Academy of General Practice, presented George L. Hawkins, M.D., neurosurgeon of St. Louis, and Frank Wissmath, M.D., pediatrician of Clayton, on the subject, "Hydrocephalus and Other Growth Disturbances of the Skull in Childhood."

Paul Dennis, M.D., *Secretary*

### Southeast Missouri Academy Meeting

The Southeast Missouri Chapter of the Missouri Academy of General Practice with cooperation of Lederle Laboratories presented a one day symposium of interest to both general practitioners and specialists on Sunday, May 20, at the Colonial Tavern in Cape Girardeau. The morning program included a discussion by John Modlin, M.D., University of Missouri Medical School, on "Life Saving Measures for the Severely Injured Patient," and John D. Leidholt, M.D., University of Colorado Medical School, Denver, on "Whiplash Cervical Injury." This was followed by a period of questions and an-

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1. Borota, A., and Grinell, R.N.: J. Amer. Geriatrics Soc., 10:413, 1962.
2. Spoor, H. J.: N.Y. State J. M. 58:3292, 1958.
3. Lubowe, I. I.: Western Med. 1:45, 1960.
4. Weissberg, G.: Clin. Med. 7:1161, 1960.

Speakers and moderators sat at the head table: Drs. Williamson, Campbell, Block, Constant, Cochran, Modlin, Peck, Leidholt and Crowe.

swers. A luncheon was held for physicians and their wives with the featured speaker, George A. Constant, University of Texas Medical Branch, who spoke on "Adolescence." In the afternoon Matthew Block, M.D., University of Colorado Medical School, Denver, spoke on "Anemia—the Age Old Dilemma," and Paul Williamson, M.D., Bellaire, Texas, discussed "Endocervicitis."

Luncheon was for both doctors and wives.

Following the two afternoon speakers a panel discussion with all of the program speakers participating was held, stimulated by questions from the audience. The occasion was terminated with a reception for all of those present with the compliments of Lederle Laboratories. The day's program is acceptable for five hours of Category I Credit by the American Academy of General Practice. Some 70 physicians and a good number of their wives were in attendance. The program was planned and developed by a committee under the chairmanship of John Crowe, M.D., of Cape Girardeau.

For the morning program Chester Peck, M.D., Kennett, served as moderator and the afternoon session was moderated by Edward D. Campbell, M.D., Cape Girardeau. Joe Robert Cochran, M.D., Cape Girardeau, served as master of ceremonies for the luncheon. The final panel discussion with all speakers participating was moderated by Dr. John Crowe.

W. D. English, M.D., *Councilor*

## WOMAN'S AUXILIARY

*(Continued from page 748)*

the National Advisory Council and the National Board of Trustees.

Missouri's beloved Genevieve Bartlett, one of the original Auxiliary Founders, had the privilege of delivering a beautiful invocation on this occasion. Missouri certainly owes much to Mrs. Bartlett, and I personally wish to thank her sincerely for her presence and support as one of our seven voting delegates.

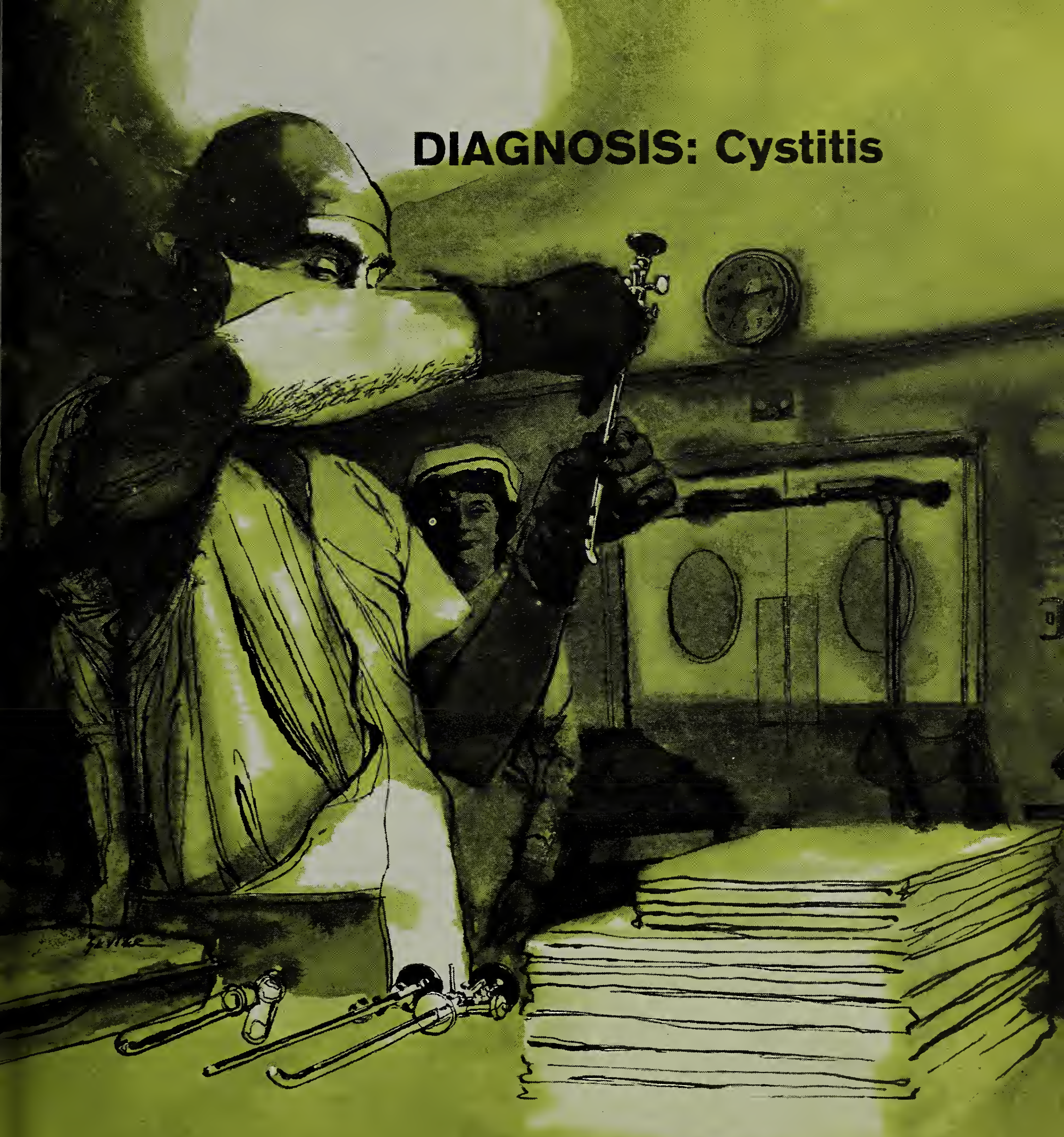
Besides those I have mentioned elsewhere, we were happy to see Bitsy Calkins, Anita Washburn, Anne Exon, Maxine Miles, Janet Neilson, Ann Whitman, Fern Ritterbusch, Dotty Deyton and Virginia Bailey from Missouri.

Now I come to Jane Crispell, your President-elect and my roommate for five days. How lucky can Missouri get? All of you have a wonderful treat to look forward to when little Jane takes over. Dynamic is the word for her. She has depth and understanding and ability which will certainly be admired by all when she heads the Auxiliary. I am sure Jasper County members will feel a glow of pride when they realize the wonderful state president she is bound to make.

During the Wednesday business meeting the national election took place and Mrs. Thuss (Louise) was installed as president, with Mrs. C. Rodney Stoltz (Virginia) of Watertown, South Dakota, as the new president-elect. These two wonderful women are sure to give the Auxiliary the excellent leadership it so needs in the next few hectic years, and we pledge to them Missouri's full support.

Most of the other delegates were on their way home by Wednesday night, but for the state presidents and presidents-elect the Thursday morning post-convention roundup was the most important meeting of all. Dr. Ernest B. Howard, Assistant Executive Vice-President of the A.M.A., gave a report on what had transpired in the A.M.A. House of Delegates, and Mrs. Thuss presented her excellent chairmen and their plans for 1962-63.

Her theme for the year is "Aim for Excellence in Achievement," and with such leadership what else can we do?



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# The Council

The Council met at Hotel Chase, St. Louis, May 26, 27, 1962, with Leonard T. Furlow, M.D., St. Louis, Chairman, presiding. Those present were Drs. Furlow, Joseph L. Fisher, St. Joseph; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Hector Benoit, Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Kenneth C. Hollweg, Kansas City; Donald M. Dowell, Chillicothe; Messrs. John Buckner, Springfield; Hollister Smith, Edgar Mothershead, Jordan Singleton, Lemoine Skinner, Gene Lunn, Tom Fox, Ray McIntyre, T. R. O'Brien, and Helen Penn, St. Louis. Attending part of the meeting were Drs. John I. Matthews, Jefferson City; Vernon E. Wilson, Columbia; H. M. Hardwicke, Jefferson City; Stanley S. Peterson, Springfield; Eugene F. Tucker, Charles R. Doyle, Henry Allen, Joseph V. Finnegan, St. Louis; James A. Kinder, Cape Girardeau, and Mr. Frank Woolley, Chicago.

### ADVERTISING

A plan to solicit additional direct advertising for Missouri Medicine was presented and a list of prospects was shown. The estimated cost to reach 5,000 potential advertisers will not exceed the $1,500 budgeted for this purpose.

### MATERNAL WELFARE COMMITTEE

A request from the Maternal Welfare Committee for $100, a one time grant, to reactivate their maternal death studies in the eastern part of the state, on motion of Dr. Barger, duly seconded, was approved. Other expenses of the eastern and western sections are payable when requested by the respective chairmen up to the amount previously authorized for this purpose.

### 1964 SESSION

Possible dates for the 1964 Annual Session to be held in St. Louis were discussed and on motion of Dr. Stuart, duly seconded, this was left to Dr. Furlow and Mr. O'Brien to determine.

### FIELD SECRETARY REPORT

Mr. McIntyre reported on recent events: A meeting of the Lincoln-St. Charles County Medical Society; his talk to the class on hospital administration at Washington University; 10th Councilor District meeting at Poplar Bluff with Butler-Ripley-Wayne Society; meeting of the Committee on Infant and Child Care with the Division of Health; St. Louis Medical Society forum on medical care for the aged; Spring Conference at University of Missouri; conference in Columbia on the Handicapped, promoted by the Missouri Health Council and Missouri University Medical School and School of Education; Missouri Public Health Association annual meeting; meeting at Whiteman Air Force Base; A.M.A. Rural regional health conference in Des Moines; meeting of the Missouri Academy of General Practice, Southeast Missouri chapter, at Cape Girardeau; meeting of the Committee on Control of Venereal Disease. He reported that the senior medical students at the University of Missouri Medical School were entertained at lunch and a panel on medical practice during the Spring Conference in Columbia.

The luncheon meeting was sponsored by MSMA Rural Health Committee in cooperation with the Public and Professional Relations Committee of the Missouri Academy of General Practice. Jack Bass, M.D., Salem, spoke on "Solo Practice," Charles Worley, M.D., Sweet Springs, on "Partnership Practice," A. E. Spelman, M.D., Smithville, on "Group Practice," Donald Dowell, M.D., President, MSMA, on "Medical Organization," and Roy Pearse, M.D., President, Missouri Academy of General Practice, on "The Academy of G.P." Edward Campbell, M.D., Cape Girardeau, served as master of ceremonies. He stated that of 63 graduates of the school this year, 20 were interning in Missouri.

### CORPORATE PRACTICE

The following report of the Committee on Corporate Practice was presented and on motion of Dr. Fisher, duly seconded, it was accepted and the committee was asked to continue study.

Special Committee on Corporate Practice
Hotel Chase, St. Louis
April 8, 1962

Presiding: Kenneth C. Hollweg, M.D., Kansas City, Chairman.

Present: Drs. Hollweg; Donald M. Dowell, Chillicothe; John P. Ferguson, Springfield; Robert Kelley, St. Louis; Donald Giesler, Osceola; Ray Williams, St. Louis; Robert H. Lund, Clayton; J. H. Summers, Lebanon; Leonard T. Furlow, St. Louis; G. W. Winn, Boonville; Messrs. John W. Noble, Kennett; William Boles, St. Louis; Jordan Singleton, Lemoine Skinner, Tom P. Fox and T. R. O'Brien, St. Louis; Helen Penn, St. Louis.

Purpose: It was pointed out that the House of Delegates had suggested further study of corporate practice, especially in view of the March 15, 1962 opinion from the office of the Attorney General which in effect said that corporate practice was legal. The opinion is based on two court cases which were decided by the Missouri Supreme Court, the Lewin case and the Gate City Optical Company case. The opinion in full was read and copies were made available to the Committee.

Courses Open: It was suggested that three courses of action might be available:

1. If opinion is considered to be wrong, efforts might be made to bring a case to the courts in order to secure a different decision from the Missouri Supreme Court.

2. If opinion is considered to be right, the present licensing laws could be changed to include wording relating to physicians who are members of corporate groups, or By-Laws of MSMA regarding ethical standards might be changed to include appropriate wording.

3. Create by legislation an association type act similar to those enacted by other states.

Action: On motion of Dr. Williams, duly seconded, it was agreed that study should be continued, that the committee at this time favors incorporation under the general business incorporation laws of Missouri, with the proviso that changes should be incorporated into the present medical practice act to obtain necessary ethical safeguards, and that legal studies be made and when completed should be made available to the Committee. Also, it was agreed that this report should be considered as an Interim Report.

### CIVIL DEFENSE

The following report of the Committee on Civil Defense was presented and on motion, duly seconded, was accepted.

Committee on Civil Defense Disaster Medical Care
Missouri Hotel, Jefferson City
May 6, 1962

Presiding: Carl D. Siegel, M.D., Sedalia, Chairman.

Present: Drs. Siegel; J. S. Sanders, Jefferson City; Ned White, Springfield; B. A. Moranville, Columbia; Mr. Thomas P. Fox, St. Louis.

Absent: Drs. G. L. Watkins, Farmington; C. P. Hungate, Kansas City; J. L. Mothershead, St. Joseph; O. P. Hampton, University City; George E. Thoma, St. Louis; Curtis H. Lohr, Clayton; John Walterscheid, Hannibal; H. D. Steinbeck, Union; M. P. Leech, Fayette; C. R. McAdam, St. Louis; R. G. Elliott, Kansas City; Merrill Roller, Hannibal; G. M. Nunnelly, Cape Girardeau; R. W. Kieber, St. Joseph; Foster Whitten, Carthage; David Hall, Springfield; C. M. Waggoner, Columbia; F. D. Alexander, St. Louis; Mr. Ken Mayfield, Jefferson City.

Self-Help Approval: Dr. Siegel reported the action taken by House of Delegates at 1962 Annual Session (March 18-21) approving the Medical Self-Help Program recommended by the Committee, as designed by U. S. Public Health Service in cooperation with American Medical Association. Letter reported such action sent March 23, 1962, by Dr. Siegel to Missouri Division of Health.

Responsibility: Chairman reported on action of Council, December 3, 1961 after consideration of recommended action by the Committee, November 19, 1961. In lieu of Missouri Physicians assuming the responsibility of medical care in natural or wartime disasters, the Council requested the committee to work with Dr. Hardwicke to develop a program of medical care aspects for presentation to the Council.

Self-Help Kits: Dr. Siegel reported on development to date of Self-Help Training Kit program. Under direction of Medical Doctors and Doctors of Osteopathy, the kits are being distributed upon request—laymen should be encouraged to ask for the kits, and for training program.

Missouri State Civil Defense Activities: Dr. Siegel reported on speaking engagements, past and future, including: Springfield, Boone County Medical Society, Pettis County, Bolivar, Missouri Osteopaths in Kirksville, St. Louis Medical Society. Audience includes professionals and laymen—explaining in particular the Self-Help program. Dr. Siegel is assisted by Mr. Kenneth Mayfield and Mr. Hill on Dr. Hardwicke's staff. Announcement made of Kansas City Program, May 12.

Program Coordination: Attention was called to importance of coordination of all medical civil defense activities with Governor's Advisory Committee and Divisions, to avoid conflicts of major exercises.

Civil Defense Emergency Hospitals: Discussed Civil Defense Emergency Hospitals in Missouri—69 prepositioned and three additional used for training and for exhibition. Reference was made to a) value, b) personnel to man, c) displacement, d) storage, e) color coding in future to identify departments, f) future geographic relocation, g) plans for exhibit at Missouri University, h) current plans are to set up C.D.E.H. on existing hospital premises, enlisting personnel of existing hospital.

Battle Creek, Dr. Sanders: Dr. Sanders reported on meeting in Battle Creek, December 4-7, 1961. Suggested that local county medical society be informed of program plans to enable physicians to direct program and provide qualified teachers—e.g. nurses. In addressing audiences, it was noted consistently more women are present than men.

Liability in Training: Dr. Siegel inquired in Battle Creek, December 4, regarding mal-practice liability possible in training of laymen for civil defense work. Copy of Civil Defense Act does not include such regulation. Dr. Siegel will discuss further with Dr. Hardwicke and Mr. Lupke, the possibility of proper legislation in 1963.

Seminar, April 19, 1962, Missouri University: Chairman reported on Civil Defense Seminar at Missouri University, April 19, 1962.

a) Shelters—use of domestic facilities when community shelters are not available—rate of dissipation of fall out.

b) Immunization prior to disaster—example discussed included typhoid and tetanus—duration of protection—children in particular.

c) Public panic and apathy—military and natural disasters, were discussed. Dr. Siegel referred to reaction of public to installation of military bases nearby—range of attitude from resentment to sincere gratitude—need for education of civilian population.

d) Manpower Inventory—discussion included upgrading in emergencies, e.g. Veterinary personnel and facilities.

e) Pharmacy Inventory—Nebraska cited as good example of stock-piling, also working with wholesale distributor.

Holifield Hearings: Chairman will consult further with Mr. Lupke regarding procurement of copies of Holifield Hearings.

Hospitals as Shelters: Following a discussion, it was agreed that hospitals would not be a good choice of location for public disaster shelters.

Self-Help Kits—Lessons and Handbooks: Replying to inquiry, Dr. Siegel asks that the twelve lesson manuals and corresponding handbooks, be returned to Dr. Siegel in care of Division of Health, Jefferson City, Missouri. Please, after reviewing, write suggested corrections, identifying by page number.

New Publication: New publication, "Civil Defense in the Soviet Union" by Leon Gauré, University of California Press. Price: $2.45.

Next Meeting: Next regular meeting—late November or early December.

Adjournment: 3:00 p.m. (C.S.T.).

### MENTAL HOSPITALS

A letter from Dr. George Ulett asking the opinion of the Council concerning the use of osteopathic students in mental institutions was read. After discussion bringing out that more study was necessary, on motion of Dr. Fisher, duly seconded, it was voted to thank Dr. Ulett for coming to the Council with this question and to refer the matter to the Committee on Mental Health.

### ANSWER TO HOUSE RESOLUTION

Referring to the resolutions presented to the House of Delegates by Dr. Edwards of St. Louis asking for more specific information on expenditures and the reference committee report suggesting that these be set out, the material was presented for inclusion in the July issue of MISSOURI MEDICINE. It was suggested that the work of the various committees be more definitely designated and on motion of Dr. Fisher, duly seconded, it was approved with these changes to be made.

### M.H.A.

Dr. Hollweg reported on a liaison committee meeting with the Missouri Hospital Association on May 24, which he said was most satisfactory and that further meetings are scheduled. Representatives of Missouri Hospital Association present were: Mr. William Gnadt, Bonne Terre, President M.H.A.; Mr. John Warner, St. Louis, President Elect M.H.A.; Mr. Keyton Nixon, Mexico and Mr. Ted Lloyd, Executive Secretary M.H.A. Representatives of MSMA were Donald M. Dowell, Kenneth C. Hollweg, Leonard Furlow and members of the staff.

### RESOURCES SURVEY

In compliance with the wish of the Council expressed at its last meeting, certificates of appreciation to officers of the Woman's Auxiliary and to County Auxiliaries which had completed surveys were shown and it was announced that these would be sent out right away.

### MEDICOLEGAL EXAMINERS

Dr. Tucker presented a proposed legislative act to establish a Board of Medicolegal Examiners, with two corrections: Delete the last nine lines of Section 8; add the word "chief" before "associate or assistant state medicolegal examiner" in Section 9. On motion of Dr. Whitener, duly seconded, it was voted that the act as amended, be approved and that the Missouri Bar Association be contacted for endorsement and possible sponsorship.

### GOOD SAMARITAN LAW

The possibility of passage in Missouri, and feasibility of a Good Samaritan Law was discussed. It was pointed out that one component society was especially interested in it. After discussion, in which it was brought out that there is a possibility that it would be unconstitutional in Missouri, on motion of Dr. Hollweg, duly seconded, it was decided that any such action be deferred and the component society be told of the reasons.

### KERR-MILLS

Mr. O'Brien reported that the Interim Committee of the Legislature studying the medical care aspects of aging had held five meetings, and that the Association representatives, G. Warren Winn, Chairman, Committee on Medical Economics, and Stanley S. Peterson, Chairman, Committee on Aging, appeared at one hearing, April 17, and presented statements. It was reported that that committee expects to have its report complete in October and have legislation ready to introduce in the 1963 Legislature.

### DR. RIES CANDIDACY

Dr. Furlow said that Dr. Douglas A. Ries, Richmond Heights, had telephoned him and also sent him a statement that he would run on the Republican ticket for the United States Senate this fall. On motion of Dr. Fisher, duly seconded, it was agreed to tell Dr. Ries that the Council agreed with his philosophy but that the Association could not sponsor candidates and that his statement would be referred to MMPAC.

### MR. WOOLLEY

Mr. Woolley of the A.M.A. gave a brief description of the situation on the King-Anderson bill, pointing out that the longer it can be retained in the Ways and Means Committee the better is the chance of it not passing in this session. He pointed out that if it did not pass in this session, that more support was going to be needed in the next Congress to keep it from passing then. He complimented Missouri on the work that had been done.

### 1963 ANNUAL SESSION

Dr. Matthews gave a general outline of the scientific program planned for the 1963 Annual Session, including some speakers that would be invited. He asked that the Committee be relieved of planning the social functions. The Council asked that staff members make suggestions relative to these functions. A letter from the Greene County Medical Society congratulating Dr. Matthews on the 1962 scientific program was read by Mr. O'Brien.

### RESOLUTION ON COUNCIL ON MEDICAL EDUCATION

Dr. Benoit presented the resolution adopted by the House of Delegates concerning the personnel on the Council on Medical Education of the AMA being composed of six practicing physicians and four faculty members. Following discussion, on motion of Dr. Hollweg, duly seconded, it was voted that it be presented to the AMA. Dr. Benoit requested that copies go to the College of American Pathology, Society of Clinical Pathologists, the College of Radiology and the American Society of Internal Medicine.

### TELEPHONE LISTING

Dr. Benoit presented a letter from the AMA stating that the Jackson County Medical Society should change the present AMA listing in their telephone directory. It was pointed out that this has been discussed with legal counsel of AMA in Chicago on May 19. Negotiations are in process.

### K. C. GENERAL HOSPITAL

At the request of Dr. Benoit, Dr. Wilson told of some of the preliminary plans of the University of Missouri School of Medicine cooperating with a Foundation recently formed to operate the Kansas City General Hospital and other medical facilities in Jackson County. Tentative plans for the intern and residency training programs of the Kansas City General Hospital are involved. He said details were far from complete but progressing. He said that the program will make maximum use of a volunteer part time staff but that there would be some key full time personnel. Dr. Wilson said he would be glad to present the completed plan and the contract, when drawn, to the Council.

### POLIO VACCINE

Dr. Kinder presented the report of a meeting of the Committee on Infant Care with representatives of the Division of Health, the Missouri Academy of General Practice and the Missouri Academy of Pediatrics. The uses of the Salk and Sabin vaccines were further discussed and on motion, duly seconded, the report was accepted as follows:

## Meeting of Infant and Child Care Committee, Missouri State Medical Association With Representatives of Missouri Public Health Personnel, Missouri Academy of General Practice, and Missouri Academy of Pediatrics, on Polio Vaccine, the Chase Hotel, St. Louis, Mo., May 6, 1962

At the request of the Missouri Division of Health, a meeting of representatives of the Missouri Academy of General Practice, the Missouri Academy of Pediatrics, the St. Louis County Health Department, the St. Louis City Health Department, the Kansas City Health Department and the Missouri State Medical Association Committee on Infant and Child Care was held at the Chase Hotel, St. Louis, Mo., Sunday, May 6, 1962.

The purpose of the meeting was to formulate some general recommendations for the guidance of physicians, health officers and others in the state of Missouri relative to the use of oral polio vaccine. Certain technical and administrative problems are associated with the use of this vaccine. Some of these are:

1. The problem of preservation of the commercial product and the possible seasonal variation in its effectiveness.
2. Enteric viruses may interfere with the effectiveness of the oral vaccine.
3. People moving from one community to another after immunization with but one type oral vaccine.

Considerable discussion, with participation of all present, took place in relation to Salk vs. the Sabin vaccine. After all had expressed their views the following general recommendations were unanimously adopted by the group:

"Paralytic polio in Missouri and in the nation is at the lowest incidence for many years. This is due in large part to seven years of use of Salk vaccine by injection.

We believe, therefore, that Salk vaccine should continue to be the principal preventive agent used at present, and we urge that all those under age 50 who are as yet unimmunized receive the full course of three injections plus boosters. There is no emergency or urgency at this time for communities or individuals to use the live oral vaccine.

It is therefore *not* recommended that oral polio vaccine be used except in special situations at this time. The use of oral vaccine in these situations, such as an impending epidemic or limited trial programs, should be decided upon by local county medical societies in conjunction with local and state health authorities.

Oral polio vaccine may in the future be of particular value in certain areas where Salk vaccine has not been used adequately, especially if used on a widespread community basis.

In general, use of oral vaccine should be avoided during the summer months since it is less effective then than at other times of the year.

Salk vaccine, therefore, should be emphasized as the main line of defense against polio at this time with continued use of boosters periodically."

The proposed Vaccination Assistance Act now before Congress providing for federal funds for the purchase of vaccines for preschool children and to finance promotional vaccination campaigns was discussed. The consensus of those present was that there was no need in Missouri at present justifying the passage of this bill.

The Missouri Division of Health requested that a small committee from the group assembled representing various organizations present be appointed to advise with the Division from time to time on vaccination problems. This committee will be: James Kinder, M.D., Cape Girardeau; Clement E. Brooke, M.D., Columbia; Roy Pearse Jr., M.D., Nevada.

### LABORATORY MEDICINE

A request from the Committee on Laboratory Medicine that a letter go to the Membership including pamphlets concerning lay laboratories was presented. On motion of Dr. Stricker, duly seconded, this was approved.

### MSMF

The following report on the Missouri State Medical Foundation was presented. The plans for fund raising and present statistics were discussed. It was pointed out that stationery had been obtained and a brochure was planned, all of which would cost something more than $1,000. On motion of Dr. Hollweg, duly seconded, it was voted that up to $1,500 be appropriated by the association for the initial cost of setting up and getting under way the Foundation fund raising program.

## Résumé of the Missouri State Medical Foundation Promotional Campaign

*Foreword.* The Missouri State Medical Foundation is one of the most appealing and worthwhile public service programs to be developed by Missouri physicians. If the profession is to gain full value from this program, however—both as a substantial student aid program and as an important vehicle to better public relations—plans will need to be initiated soon by the Board of Trustees to insure the long-range growth and development of the Foundation.

The most critical problem we face at the moment—and one which demands immediate attention by the Board—is the need for securing additional loan funds to finance expected applications for the coming school year. At the same time, it is suggested that consideration be given to the development of a continuing, annual fund-raising plan to satisfy MSMF loan requirements in years to come. The $7.50 annual assessment voted by the 1962 House of Delegates will not, of course, be available until 1963, and even so it's not expected to satisfy the anticipated demand for loan funds.

A second area of vital concern is the systematic promotion of MSMF activities—primarily to eligible students and medical school faculties—in order to publicize the Foundation and foster good will for the medical profession. Much of this information phase of MSMF operations should, of course, be delayed until the Foundation has obtained sufficient working capital (through fund-raising drives) to avoid disappointing additional applicants. But we believe it would be wise to formulate a comprehensive information program, now, so that MSMF literature can be prepared, printed and made ready for distribution at the appropriate time.

### *Fund-Raising Plan*

1. Appeal to Physicians
2. Appeal to County Medical Societies
3. Appeal to Non-Medical Donors . . .

—Mail solicitation of potential contributors (under $1,000)

—Personal solicitation of potential contributors (over $1,000)

*MSMF Information Program*

1. Information to Medical Students . . .
—Loan recipients
—Potential applicants
2. Information to Physicians
—Literature
—Annual report
3. Information to the General Public

TREASURER'S REPORT

Dr. Doyle reported on the finances of the Association for the four month period since the first of the year and also gave a review of receipts and expenditures on the 1962 Annual Session. On motion of Dr. Hollweg, duly seconded, both reports were approved.

NEXT MEETING

Dr. Hollweg invited the Council to hold its September meeting in Kansas City and the dates of September 22 and 23 were set if hotel facilities are available.

DR. FURLOW THANKED

On motion of Dr. Benoit, Dr. Furlow and Mrs. Furlow were thanked for the Saturday evening dinner party.

Leonard T. Furlow, M.D., *Chairman*

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## RAMBLINGS

*(Continued from page 790)*

was Mr. Rex Davis, News Director of KMOX. The following panel members participated: Mr. Anthony Salamone, Director of Adult Education, St. Louis University; Albert M. Repetto, M.D., St. Louis Medical Society Council member; Mr. James F. Hornback, leader of the St. Louis Ethical Society, and Mr. Thomas B. Curtis, Representative of the second Missouri Congressional District. Mr. Salamone and Mr. Hornback spoke in favor of putting health care for the aged under social security with Dr. Repetto and Congressman Curtis speaking against such a proposal. During the debate there was both applauding and booing from the audience. The proposed King-Anderson Bill, which is backed by the present administration, was the center of discussion by the members of the panel. Mr. Curtis stressed that the administration sponsored King-Anderson Bill would cover less than 25 per cent of the health costs of the aged. In addition, he pointed out that it would not include more than 4,000,000 persons over 65 who are not under social security, many of whom need help most. Furthermore, he said the estimation of the costs of the King-Anderson program were far too low.

At the close of formal talks by the panel members, Mr. Davis called for written questions from the audience to be directed to specific panel members. Many more questions were submitted than could be discussed during the time allotted for this period.

This was the fifth of a series of five medical forums which have been sponsored jointly by the St. Louis Medical Society, the *St. Louis Globe-Democrat* and KMOX. The Chairman of the medical forum committee of the St. Louis Medical Society is Eugene Henschel, M.D., St. Louis.

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## NARCOTIC ADDICTION

*(Continued from page 768)*

"The Federal Bureau of Narcotics wishes to express its complete approval of the views contained in the Statement of the American Medical Association and the National Research Council. The Bureau of Narcotics believes that the American Medical Association-National Research Council statement clarifies a subject on which there has been widespread public and professional misunderstanding. The Bureau of Narcotics subscribes completely to the view that the federal law does not consider drug addiction a crime. The National Research Council and the American Medical Association have performed an outstanding public service which will greatly advance the joint efforts of the law enforcement agencies and medical-health organizations who are charged with the responsibility for dealing with the narcotic drug problem.

"The Bureau is pleased to note that the American Medical Association has reaffirmed its position opposing the establishment of community ambulatory clinics for the withdrawal of narcotics from addicts and the continuing maintenance of addicts on narcotics.

"The Bureau of Narcotics also supports the five measures set out in the last paragraph of the statement of the American Medical Association and the National Research Council which will provide addicted persons with the best possible rehabilitative treatment programs and reduce and, if possible, eliminate narcotic drug addiction."

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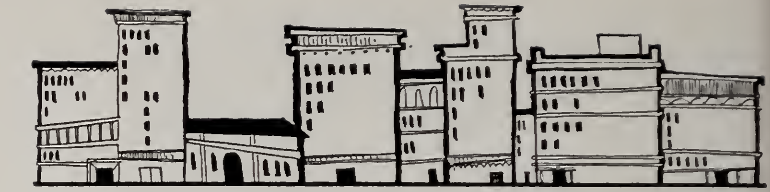
# From the Medical Schools



## UNIVERSITY OF MISSOURI

### Visitors

Recent visitors to the Department of Microbiology include: Dr. Herbert S. Wenner, assistant professor of pediatrics, University of Kansas School of Medicine, who presented a seminar entitled "Respiratory Viruses." Dr. Robert A. Greene, professor of microbiology, California College of Medicine, presented a history of microbiology lecture on the Development of Culture Media. Dr. Delaphine Wycoff, Wellesley College, Massachusetts, a member of the Education Committee of the American Society for Microbiology.

Dr. A. G. Karlson, division of microbiology, Mayo Clinic, Rochester, who spoke on Problems in the Laboratory Diagnosis of Tuberculosis. Dr. Mildren Galton, chief of veterinary laboratory services, Communicable Disease Center, Atlanta, Ga. And, Dr. Brooks D. Church, department of microbiology, University of Washington, Seattle, who spoke on the Action of Enzymes on Cell Walls.

A visitor to the department of surgery at the Medical Center was Rollins C. Hanlon, M.D., professor of surgery, St. Louis University, a guest at the general surgery conference May 16. Dr. Hanlon also conducted grand rounds following the conference.

### Grants

The Board of Curators of the University of Missouri has accepted two grants totaling $40,910 from the U. S. Public Health Service, National Institutes of Health, in continued support of two training programs being conducted in the department of medicine of the School of Medicine. Both grants are for the period from July 1, 1962 to June 30, 1963.

One of the grants is in the amount of $25,056 to support continuation of research training in cardiovascular diseases under the direction of C. Thorpe Ray, M.D., professor and chairman of the department of medicine. The second, in the amount of $15,854, to support continued graduate training in diabetes, is under the direction of Thomas W. Burns, M.D., associate professor of medicine.

### New Appointments

Henry Mack Parrish, M.D., was appointed associate professor of community health and medical practice, effective July 1, 1962. Dr. Parrish received his B.S. degree from Wake Forest College, and his M.D. degree from the University of Pennsylvania. He also holds Master and Doctor of Public Health degrees from Yale University.

Dean A. Schmidt was appointed assistant professor and associate librarian in medical bibliography, effective June 18, 1962. Mr. Schmidt holds A.B. and A.M. degrees from the University of Minnesota, and has served in the medical library of the University of Michigan.

James W. Mackenzie, M.D., was appointed assistant professor of surgery (thoracic) in the School of Medicine, effective July 1, 1962. He received his B.S. and M.D. degrees from the University of Michigan, the latter in 1951.

Thomas Thoburn Harkness, M.D., was appointed assistant professor of surgery (anesthesiology), effective June 27, 1962. A native of California, Dr. Harkness attended Dakota Wesleyan University at Mitchell, S. Dak., and received his A.B. degree from the University of California and his M.D. degree from Yale University School of Medicine.

Daniel E. Overack, Ph.D., was appointed assistant professor of anatomy, effective June 1, 1962. Dr. Overack, a native of Indianapolis, received his B.S. degree at Loras College, Dubuque, Ia., and his A.M. and Ph.D. degrees from Indiana University.

### Trips and Talks

Dr. Frank B. Engley Jr., professor and chairman of the department of microbiology, attended the annual meeting of the American Society for Microbiology in Kansas City in May and represented the Eastern Missouri Branch of the Society at Council Meetings as a National Councellor, and presented papers at the Symposium on "Antiseptics and Disinfectants" and "Bacteriostats vs. Disinfectants." Dr. Engley attended

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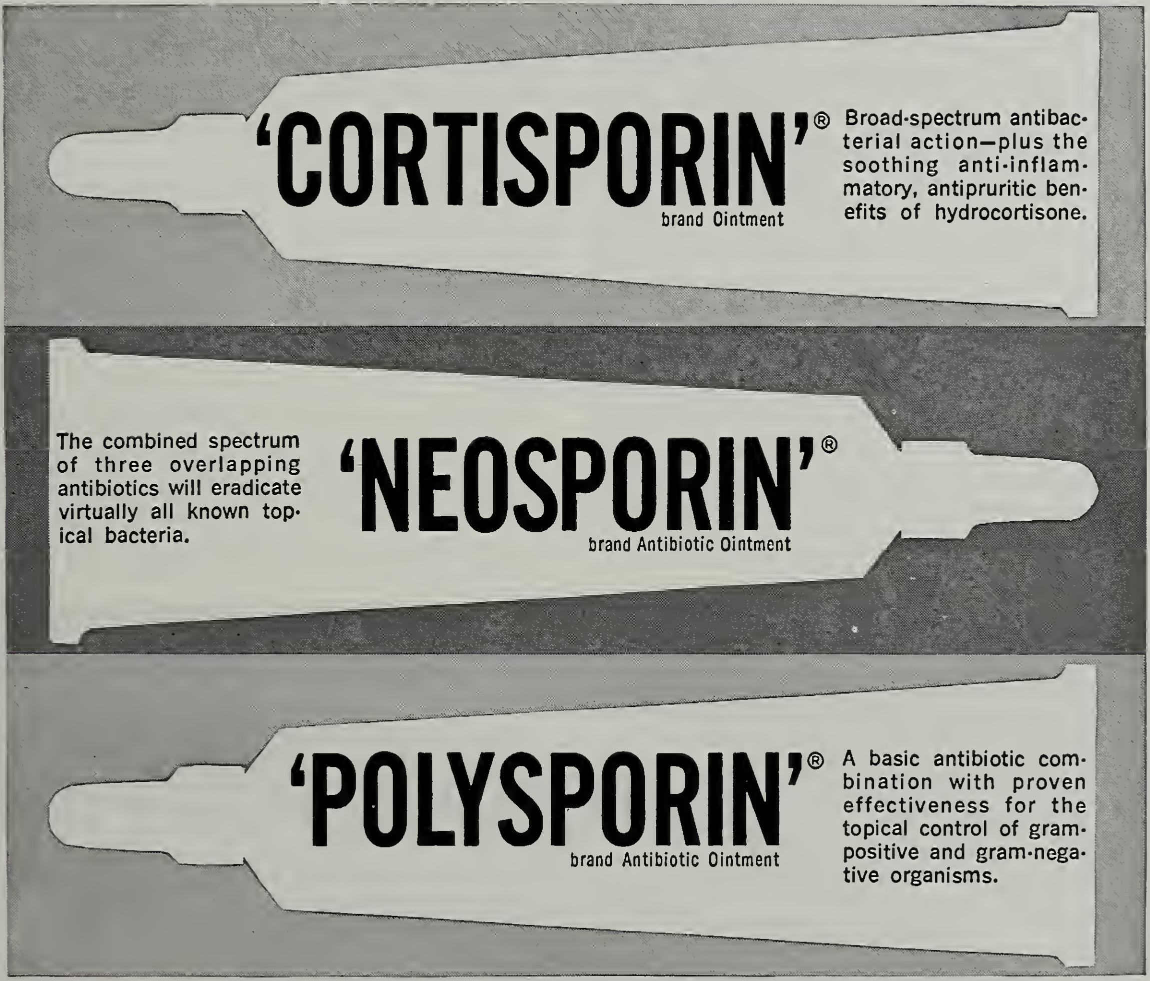

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| Zinc Bacitracin | 500 Units | 400 Units | 400 Units |
| Neomycin Sulfate | — | 5 mg. | 5 mg. |
| Hydrocortisone | — | — | 10 mg. |
| Supplied: | Tubes of 1 oz., ½ oz. and ⅛ oz. (with ophthalmic tip) | Tubes of 1 oz., ½ oz. and ⅛ oz. (with ophthalmic tip) | Tubes of ½ oz. and ⅛ oz. (with ophthalmic tip) |

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the annual meeting of the Missouri Public Health Association in Jefferson City in May and was program chairman of the meeting, was convener for a seminar on "Viral Hepatites" at one of the general sessions of the association, and was reappointed to the program committee and appointed chairman of the resolutions committee.

Dr. James T. Barrett, associate professor of microbiology, presented a scientific paper "Characteristics of a Drug Induced Leukoagglutinin" coauthored by D. S. Metcalfe, May 6-10 in Kansas City, at a meeting of the American Society for Microbiology. At the same meeting Dr. Donald P. Durand, assistant professor of microbiology, attended sessions where W. Stenback presented a paper on "Host Influence on NDV Density" coauthored by Dr. Durand. Dr. Herbert S. Goldberg, professor of microbiology, presented "Morphological and Biochemical Observations of Gram-negative Anaerobic Rods" at the meeting.

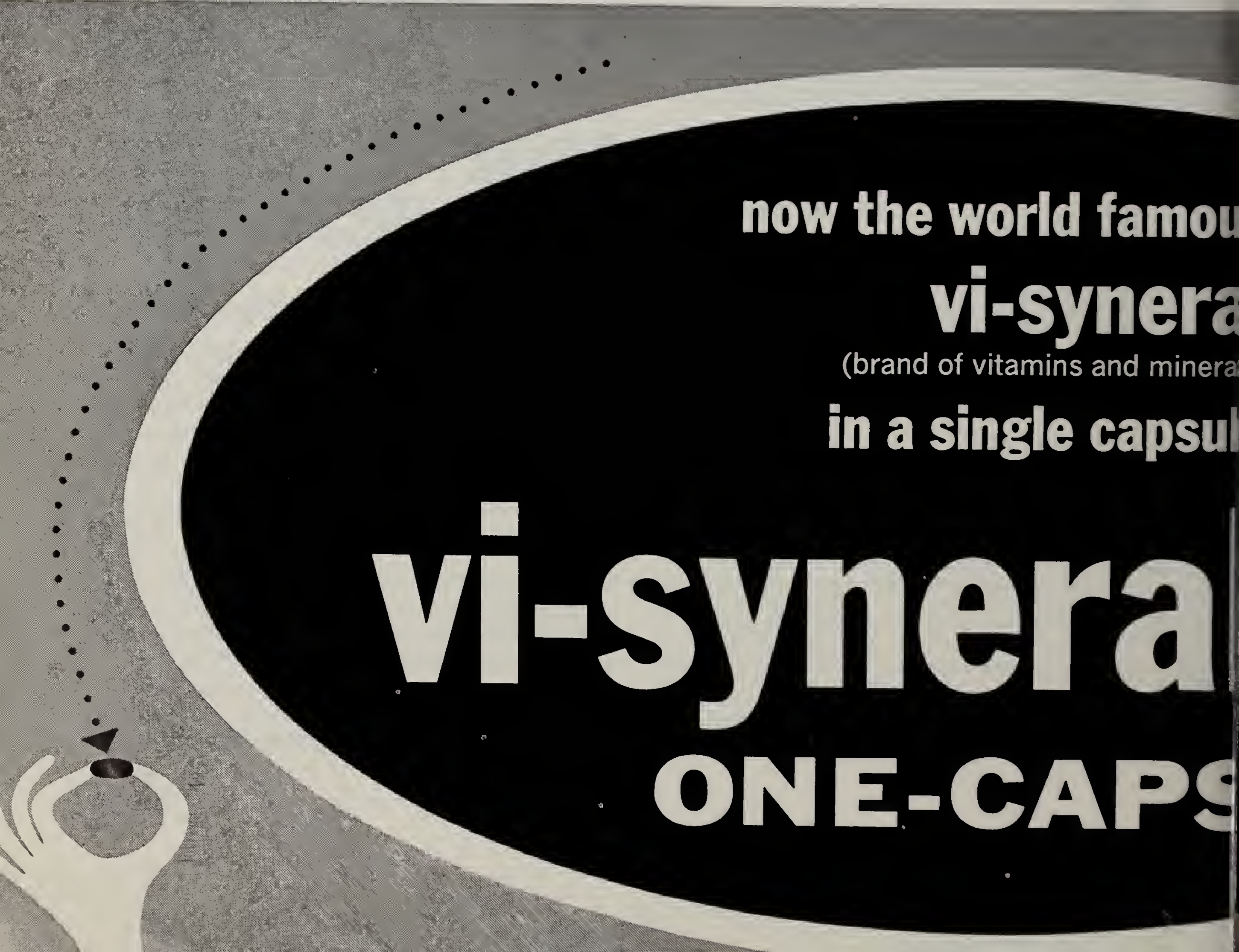
On May 13-15, Dr. Goldberg entertained Mrs. M. Galton, C.D.C. Director, Vet. Public Health Laboratories, and May 14 to 16, he attended the meeting of the M.P.H.A. in Jefferson City. May 11, Dr. Goldberg was invited to serve on the WHO Expert Advisory Panel on Food Additives for a period of five years. Dr. Goldberg also attended the June 4 National meeting of the American Medical Technologists, in St. Louis.

Dr. Michael H. Ivey, assistant professor of microbiology, presented a paper with Roger Slanga entitled "Evaluations of PCA Test Using Crude, Metabolic and Melcher's Antigen," at the meeting of the American Society of Parasitology in Washington, D. C., June 12 to 15.

Dr. Fernando Tapia, associate professor of child psychiatry, was a panelist at a meeting of the Missouri Association for Retarded Children in Kansas City, June 2. Dr. Tapia generally outlined a comprehensive child psychiatry approach to the handling of the retarded child and his parents.

Dr. Rodman P. Kabrick, associate professor of psychology, attended the regional meeting of the NARC South Central Regional Conference in Kansas City June 2. The program was largely devoted to the topic of the Missouri organization of mental retardation services, present and projected.

Dr. John J. Modlin, professor and chairman of the department of surgery, and Dr. Franklin L. Mitchell, resident physician in surgery, attended the Kansas City Surgical Society meeting May 23 in Kansas City. Dr. Modlin also spoke on



"Lifesaving Measures for the Severely Injured Patient" at the Cape Girardeau Medical Society and the Southeastern Missouri Chapter of the Academy of General Practice, May 20, in Cape Girardeau.

Dr. Warren P. Sights Jr., assistant professor of surgery (neurosurgery), gave a talk to the Audrain County Hospital Staff on "Diagnosis and Treatment of Intracranial Bleeding," June 12 in Mexico, Mo.

Dr. G. W. N. Eggers Jr., associate professor of surgery (anesthesiology), attended the American Medical Association meeting in Chicago June 27 to hear "Preliminary Observations of Hemodynamic Changes Associated with Various Surgical Positions." Dr. Kenneth K. Keown, professor of surgery (anesthesiology), also attended the meeting June 24 to 29. Dr. Keown is secretary of the Section on Anesthesiology of the AMA. The meeting was held at the McCormick Place.

### ELLIS FISCHEL STATE CANCER HOSPITAL

The Thursday afternoon Consulting Staff Conferences for the month of April at the Cancer Hospital were as follows:

April 5, Dr. William Powers, associate professor of radiology, Washington University, discussed "The Technic and Diagnostic Interpretation of Laryngograms."

April 12, Dr. John Buessler, professor of ophthalmology, University of Missouri, discussed "The Detection and Management of Tumors of the Orbit."

April 18, Dr. Kermit Krantz, professor of obstetrics and gynecology, University of Kansas Medical Center, discussed "The Gross and Microscopic Anatomy of the Human Cervix."

April 26, Dr. William Cole, instructor in surgery, Washington University, discussed "The Diagnosis and Management of Wound Infections Occurring With Abdominal Surgery."

Maurice J. Jurkiewicz, D.D.S., M.D., assistant professor of surgery and head of the division of plastic surgery at the University of Florida School of Medicine, Gainesville, Fla., was the visiting surgeon at the Cancer Hospital on April 25, 26 and 27. He supervised the resident training during this three day visit and presented a paper on "The Reconstruction of the Cervical Esophagus Using a Free Jejunal Transplant" on the evening of April 26. On the afternoon of April 26, Dr. Jurkiewicz, Dr. Cole and Dr. E. J. Schewe of Columbia conducted a panel discus-

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sion on "Complications of Surgery of the Head and Neck." Dr. Jurkiewicz' visit was sponsored by the Cancer Detection Program of the Division of Health.

On April 14, Dr. John J. Modlin, professor and chairman, Department of Surgery, University of Missouri, conducted the surgical grand rounds by invitation.

## WASHINGTON UNIVERSITY

### Promotions

Dr. M. Kenton King, assistant professor of medicine and preventive medicine at Washington University School of Medicine, has been named associate dean at the Medical School. In his new post, Dr. King, who has been assistant dean for the last year, will work closely with medical students as advisor and counselor and will serve on the admissions committee of the school. He will also retain his position in the departments of medicine and preventive medicine. Dr. King succeeds Dr. Hugh Chaplin Jr., who has been associate dean since 1957. Dr. Chaplin will begin a year's leave of absence this month for study and research at the Wright-Fleming Institute of Microbiology in London under a grant from the Commonwealth Fund.

Dr. David H. Brown has been named to the rank of professor of biological chemistry.

Promoted to associate professor in the School of Medicine were Dr. Neal S. Bricker, medicine; Dr. Hugh Chaplin, medicine and preventive medicine; Dr. Anthony P. Fletcher, medicine; Dr. Luis Glaser, biological chemistry; Dr. Ernst Helmrich, biological chemistry; Dr. David M. Kipnis, medicine; Dr. Eric Reiss, medicine and preventive medicine, and Dr. James M. Stokes, surgery.

Promotions to assistant professor also effective July 1 included Dr. Walter C. Bauer, pathology; Dr. William Berman, clinical obstetrics and gynecology; Dr. William R. Cole, surgery; Dr. Morris Davidson, clinical otolaryngology; Dr. David M. Geller, pharmacology; Dr. Guerdan Hardy, clinical otolaryngology; Miss Lucille Healy, psychiatric social work; Dr. Daniel D. Klaff, clinical otolaryngology; Dr. Kaye H. Kilburn, medicine; Dr. William H. McAlister, radiology; Dr. Milton H. Meyerhardt, clinical obstetrics and gynecology; Dr. David Miller, medicine; Dr. Kenneth D. Serkes, surgery; Dr. Andrew D. Spencer, surgery; Dr. Jessie L. Ternberg, surgery, and Dr. Thomas J. Walsh, clinical medicine. Dr. James H. Satterfield was named research assistant professor of psychiatry.

### Addition to Renard Hospital

Contracts were let recently for a seventh floor addition to Renard Hospital, psychiatric unit of Washington University Medical School and Associated Hospitals Medical Center. Construction, which will cost approximately $385,000, is being financed by a grant from the United States Public Health Service and matching university funds. The Renard addition is part of an overall major building and renovation program for this hospital group, which began in May when Barnes Hospital trustees approved start of construction of a four-story addition to that hospital's Rand Johnson Memorial Surgical Wing.

The new floor will house laboratories, now on the second floor, for investigators studying biochemical and psychophysiologic aspects of mental disease. The released space will be converted into facilities for sociologic, psychologic and clinical studies of psychiatric problems. Recreational space for patients will be located on the roof above the new seventh floor with some portions covered and some areas screened for sports. The new floor will be connected by a covered bridge to Washington University's Wohl Clinic Building sixth floor, which houses other laboratories used for psychiatric research.

### Award Goes to Dr. Hartmann

Dr. Alexis F. Hartmann, professor and head of the department of pediatrics at Washington University School of Medicine, has been named the first recipient of the Abraham Jacobi Award in Pediatrics. The award, created by the Section on Pediatrics of the American Medical Association, was announced at the Association's June meeting in Chicago. Abraham Jacobi was termed the founder of pediatrics in America. He founded the first American Pediatric Clinic in 1860 and was a pioneer in methods of teaching bedside pediatrics. He was instrumental in establishing the Section on Pediatrics of the A.M.A. in 1880. He was a founding member and first president of the American Pediatric Society in 1888 and was President of the A.M.A. in 1911.

It was decided last year to create the Abraham Jacobi Award, to be given each year to an individual who has made significant contributions to the field of child health. Dr. Hartmann has done research in the treatment and management of diabetes, acidosis, alkalosis, dehydration, hypoglycemia, infection with sulfa drugs and carbohydrate metabolism disturbances. He has been head of the department of pediatrics at Washington University since 1936.

## Grants

Washington University School of Medicine has been awarded $560,027 in new research, training and miscellaneous grants from the United States Public Health Service. In addition, staff members and departments have received $1,007,925 in renewal contracts for research projects and training programs now in progress through previous USPHS support.

Largest research grant was to Dr. Lillian Recant, associate professor of medicine and preventive medicine. The $47,996 grant will be used for metabolic studies of diabetes and prediabetes.

A research grant of $45,444 was made to Dr. Robert Shank, Danforth professor and head of the department of preventive medicine, for investigations which will attempt to determine how certain inadequacies of diet lead to damage and destruction of liver cells.

A $32,162 grant will support the first year of a five-year study in which 12 universities will assess the value of x-ray therapy in conjunction with surgery of cancer of the lung. The department of pathology of the School of Medicine will serve as the collection center for study of the pathologic material from the groups of cases.

Dr. Lauren V. Ackerman, professor of surgical pathology and pathology, will head the study.

A $20,858 research grant to Dr. Paul E. Lacy, Mallinckrodt professor and head of the department of pathology, will support studies on substances which inhibit the effect of insulin on decreasing blood sugar levels to normal. The source of these inhibitors, the mechanism by which they inhibit insulin and the possible role they have in causing diabetes are unknown at the present time.

Dr. Heskel M. Haddad, assistant in ophthalmology and USPHS fellow in pediatric ophthalmology, was awarded a $18,400 grant to study cataract formation in aging and in metabolic disorders relating the eye disease to changes in the biochemical structure.

Dr. H. Mitchell Perry, assistant professor of medicine, was awarded two grants totaling $15,817 for studies involving blood pressure and hypertension. Screening methods for detection of unsuspected penicillin allergy will be studies by Dr. Charles W. Parker, instructor in medicine. The $15,640 grant will be used for studies on isolation and characterization of the blood antibodies which cause penicillin reactions.

Dr. David E. Kennell, instructor in microbiology, was awarded a $15,499 grant which will be used for studies relating genetic factors to enzyme content in the living cell.

Dr. Eric Reiss, associate professor of medicine and preventive medicine, was granted $6,476 for study of parathyroid-renal interrelations.

Special research career awards providing full salary were awarded Dr. Sol Sherry, professor of medicine, and Dr. Jack L. Strominger, professor of pharmacology and microbiology. This award is one of the most distinguished awards the Public Health Service gives. Dr. Charles W. Parker was awarded a research career development award, granted to young investigators.

A $105,428 grant was made for the expansion of the department of pathology. The funds will be used to construct and equip a new tissue culture laboratory, equip a laboratory to study the metabolism of tissue incubated in special fluids and for other equipment.

A grant of $55,841 will support post-doctoral training in medical nutrition. A grant of $48,457 made to Dr. William Landau, associate professor of neurology, and Dr. Sidney Goldring, associate professor of neurosurgery, will support trainees in these fields interested in full-time careers in research and teaching. A similar grant of $35,755 will support trainees in the fields of allergy and immunology.

Dr. Edwin Gildea, Renard professor and head of the department of psychiatry, received two grants totaling $27,027 for postgraduate training for general practitioners and professors of psychiatry.

Another award, a post-doctoral international fellowship will support the research of Dr. Johannes Gormsen.

A $5,000 unrestricted eye research grant has been made to the School of Medicine by Research to Prevent Blindness, Inc. This is the third annual grant to the school. Previous awards have supported research on the effects of diabetes on the eye.

An annual contribution of $5,000 from the Fern Waldman Memorial Fund has been presented to the department of pediatrics. The contribution will be used for equipment for the laboratory of the same name. The leukemia research project is under the direction of Dr. Teresa Vietti, assistant professor of pediatrics. More than $62,000 has been donated to the fund in the last 16 years.

## Faculty Activities

Dr. Frank McDowell, associate professor of clinical surgery, has been elected president of the American Association of Plastic Surgeons. Dr. McDowell will also serve as vice president of the Third International Congress of Plastic Surgeons when it meets in Washington, D. C. in October 1963.

Dr. Minot P. Fryer, associate professor of clinical surgery, has been selected for membership on the 18 man American Board of Plastic Surgeons. This board will be examining candidates for specialty accreditation in plastic surgery in St. Louis in May 1963.

Dr. Carl V. Moore, Busch professor and head of the department of medicine, will be William McIllrath guest professor of medicine at the Royal Prince Alfred Hospital in Sydney, Australia, during August. Dr. Moore will lecture on various hematologic subjects and will speak before the annual meeting of the Royal Australian College of Medicine in Melbourne.

Dr. John R. Smith, associate professor of medicine, will go to Cali, Colombia, in August to begin a year's stay as visiting professor of physiology at the Universidad del Valle. His trip is supported by a Rockefeller Foundation grant adminstered by the University of Tennessee. Dr. Smith will assist in the instruction of circulatory and basic physiology to the freshman class of the medical school there and act as adviser to graduate students interested in research.

Dr. John Esben Kirk, associate professor of medicine, and Drs. Martin and Ruth Silberberg, associate professors of pathology, were represented in the National Institutes of Health booklet on Research Highlights in Aging issued recently. Dr. Kirk has the distinction of being the only Missouri representative to the American Committee of the Rebild National Park Board, Inc., of Denmark. This organization is unique in that it arranges for the only celebration of American independence day by a foreign country.

## MISSOURI ACADEMY OF GENERAL PRACTICE

*(Continued from page 746)*

dent of the MSMA, Dr. Donald M. Dowell, Chillicothe, spoke to the group on organized medicine. He explained the functions of county and state medical societies and those of the A.M.A. Various programs and projects of the MSMA were well discussed by President Dowell. He urged all of the senior medical students to become members of their respective medical societies when the time came and to take an active part in shaping the future of medicine. The last speaker on the formal program was Dr. Roy W. Pearse Jr., Nevada, President of the MAGP. Dr. Pearse discussed the formation of the AAGP along with its objectives, purposes and programs. He pointed out the sound basic requirement of continued postgraduate training for membership in the Academy and pointed out many values of membership in the Academy.

Dr. Campbell in closing the session stated that those who had participated on the program would be glad to stay after the meeting and discuss informally questions which any of the audience might like to pursue.

The success of this two year project has precipitated plans for expanding this program and possibly to hold it in conjunction with M.D. Day each fall at the University of Missouri Medical Center.

## DEATHS

**Lewellen, Charles P.**, M.D., Louisiana, a graduate of Kentucky University, 1904; member of Pike County Medical Society; aged 84; died April 29, 1962.

**Cline, Edward W.**, M.D., 954 Mary St., Poplar Bluff, a graduate of New York University, 1936; member of Butler-Ripley-Wayne County Medical Society; aged 56; died May 11, 1962.

**Honich, Nicholas J.**, M.D., 8567 Park Lane, St. Louis, a graduate of St. Louis University, 1936; member of St. Louis Medical Society; aged 54; died May 14, 1962.

**Stecker, George**, M.D., 10700 Hallstead Ave., St. Louis, a graduate of St. Louis University, 1922; member of St. Louis Medical Society; aged 66; died May 16, 1962.

**Fletcher, Paul F.**, M.D., 7345 Westmoreland Place, University City, a graduate of St. Louis University, 1932; member of St. Louis Medical Society; aged 59; died May 21, 1962.

**Stine, Dan G.**, M.D., 1215 Francis Drive, Columbia, a graduate of Harvard University, 1911; member of Boone County Medical Society; aged 79; died May 29, 1962.

**H'Doubler, Francis T.**, M.D., Professional Bldg., Springfield, a graduate of Howard Medical College, 1915; member of Greene County Medical Society; aged 75; died June 18, 1962.

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# Missouri Medicine in Review

## FORTY YEARS AGO

Dr. Arthur R. McComas, Sturgeon, elected by the House of Delegates to be the head of the profession during the year 1922-1923, has been so intimately identified with the activities of the organization during the thirty-two years of his professional life that he is known to nearly every member of the Association.

Standing majestically on the eastern brow of beautiful Beacon Hill, Excelsior Springs points with pride to her new Government Hospital. This building at its present stage represents an outlay of a trifle less than half a million dollars, with first-class accommodation for about 250 of America's disabled war-boys.

The College of Homeopathic Medicine in Ohio State University will merge with the regular school of medicine of the Ohio State University. The merger marks the passing of the last homeopathic medical school in Ohio and leaves only three homeopathic colleges in the United States.

The Academy of Medicine of Kansas City has voted to establish a Clinical Week during the month of October every year. The week of October 3 to 7 is a gala period for Kansas City when the Priest of Pallas pays his annual visit.

Universal regret was the feeling among all lovers of the State University when the acting president of the University, Professor John C. Jones, submitted his resignation to the Board of Curators recently. He has been connected with the University for forty years and served as acting president on a previous occasion, 1905-1906. He has been Dean of the College of Arts and Sciences since 1900 and has received degrees from many institutions, among them the Johns Hopkins, the University of Leipsig and the University of Munich.

A complete x-ray apparatus has been installed in the Audrain County Hospital at Mexico. The machine and the laboratory will be in charge of Dr. C. A. Tedrick who plans a special demonstration of the usefulness of these aids in the treatment of the sick, and the citizens of the county will be invited to attend.

## TWENTY-FIVE YEARS AGO

Dr. Clifton Smith, formerly of the staff of the State Hospital at St. Joseph, assumed his duties as superintendent of the St. Louis Training School on July 1. He succeeds Dr. George A. Johns who resigned to accept a position in Baltimore.

The confessed slayer of Dr. J. C. B. Davis, Willow Springs, was sentenced to death after a trial at Alton, Missouri, closing July 22. The 23 year old slayer did not take the stand in his own defense of the killing of Dr. Davis on January 29, 1937. The date of execution was not fixed at the time of the sentence.

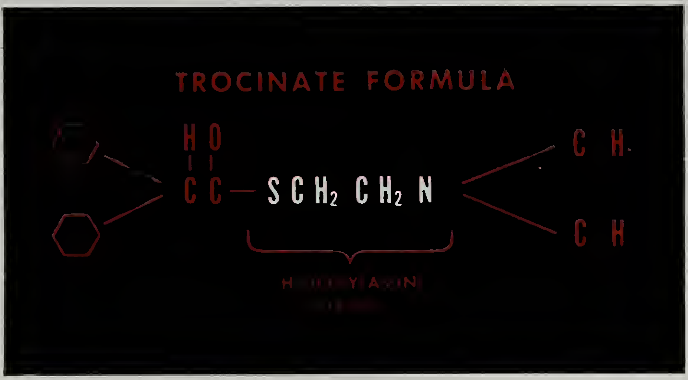
Dr. Ellis Fischel, St. Louis, Chairman of the Committee on Cancer of the Association, was appointed by the Governor on June 25 as chairman of the four member commission which will supervise construction and operation of the State Cancer Hospital. The hospital was authorized at the last General Assembly.

The Perry County Medical Society on July 14 presented resolutions to the Society for their acceptance and approval on obtaining financial assistance from the county to help care for the indigent sick of Perry County who heretofore have been cared for entirely by the good-will of the medical profession. The burden is becoming so great that it was considered necessary to ask the county for some financial assistance.

The C. V. Mosby Company, St. Louis, have recently added to their list of journals a new one, first appearing in January 1937, and entitled *Surgery*. Dr. W. J. Mayo, who writes a foreword to the first number, suggests that it is the writer rather than the reader who profits most from an original contribution.

## TEN YEARS AGO

Claude J. Hunt, M.D., Kansas City, was installed as president of the American Goiter Association at the annual session held in Chicago in May.



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G. Wilse Robinson Jr., M.D., Kansas City, was reelected president of the National Association of Private Psychiatric Hospitals at an annual meeting in Atlantic City in May. Paul Hines, M.D., Kansas City, was reelected secretary of the association.

James R. Amos, M.D., Springfield, has been named by Governor Smith as the Director of the Missouri State Division of Health to fill the vacancy caused by the death of the late Buford G. Hamilton, M.D. Dr. Amos has been director of the Greene County Health Department since 1941.

Joseph S. Lawrence, M.D., Washington, D. C., will retire as director of the Washington office of the American Medical Association on September 1 and will be succeeded by Frank E. Wilson, M.D., who has been deputy director. Dr. Lawrence has served as director since 1944.

The *Journal of the Cape Girardeau County Medical Society* has been launched successfully. It took its maiden voyage into the sea of medical journalistic endeavor in April 1952. This brings to seven the number of county medical society bulletins in Missouri published regularly by component societies of the Missouri State Medical Association. These publications are: *The Bulletin of the St. Louis Medical Society, Jackson County Medical Society Weekly Bulletin, Greene County Medical Society Bulletin, St. Louis County Medical Society Bulletin, Bulletin of the Buchanan County Medical Society, Tri-State Medical Bulletin* (published by the Jasper County Medical Society).

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*R. V. Ford: Cur. Ther. Research, 2:51, 1960.

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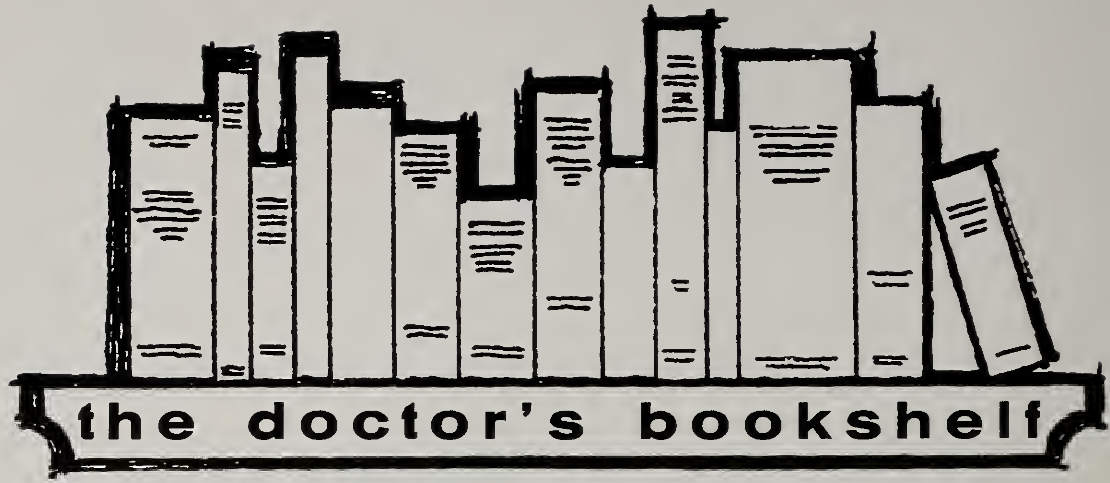

# the doctor's bookshelf

## BOOK REVIEW

Heredity in Ophthalmology, by Jules Francois, Professor of Ophthalmology at the University of Ghent, Belgium; Member of the Academy of Medicine, The C. V. Mosby Company, St. Louis, 1961. Price: $23.00.

This comprehensive monograph (731 pages, 629 figures including six in color) has been translated by the author himself from the French edition bearing the same title. The translation was supervised by the English ophthalmologist, Frank W. Law, senior surgeon of Moorfields Eye Hospital in London. Of the 43 chapters comprising the book, two were written in collaboration with Dr. G. Verriest.

Part I of this work represents a review of the elementary concepts of general genetics with emphasis on the basic rules which govern dominant, recessive and sex-linked inheritance, and which explain chromosomal abnormalities by linkage of genes or crossing over, nondysfunction of the X-chromosomes, lethal factors and other aspects of scientific interest. The significance of mutations, variations in the phenotypic manifestation of genes, of dimerism, polymerism, polyallelism and of environmental influences is discussed with admirable elegance and terseness. The elements of statistic and biometry are treated in a brief but concise form.

Part II concerns the genetics pertaining to ophthalmology with particular emphasis on the varieties of inherited ophthalmological diseases, the role of carriers of genetic defects and their detection. Two chapters are devoted to the treatment and preventive management of hereditary ocular diseases.

Part III deals with the pathology and geneology of the ocular hereditary diseases themselves.

Part IV deals with the hereditary aspects of general disease with ocular manifestations, including metabolic, neurological, constitutional, hematological, endocrinological and vascular disorders. The last chapter is devoted essentially to mesodermal, ectodermal and neuroectodermal syndromes.

Undoubtedly, this work fulfills its purpose as a valuable reference book not only for ophthalmologists, but also for internists, neurologists and, perhaps, also the general practitioner. P.A.C.

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Current Diagnosis Treatment, by Henry Brainerd, M.D., Professor of Medicine and Chairman, Department of Medicine, University of California School of Medicine (San Francisco), and Physician-in-Chief, University of California Hospitals (San Francisco); and Sheldon Margen, M.D., Research Biochemist, Department of Biochemistry, University of California School of Medicine (San Francisco); and Milton J. Chatton, M.D., Assistant Clinical Professor of Medicine, University of California (San Francisco) and Stanford University (Palo Alto) Schools of Medicine, and Geriatric Consultant, Palo Alto Medical Clinic. Lange Medical Publications, California, 1961. Price: $8.50.

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Modern Medical Treatment, by various authors, edited by Henry Miller, M.D., Physician in Neurology, Royal Victoria Infirmary, Newcastle upon Tyne. The Williams and Wilkins Company, Baltimore, 1961. Price: $7.00.

# Curiosa et Trivia

**WILLIAM B. McCUNNIFF**

While the furor rages unchecked over the legality, the advisability, the politics, and the practicality, of Federal Medicine about thirty-six million Americans (roughly 20 per cent) are today eligible for direct federal financial aid for medical, hospital, or health insurance bills.

And, reportedly, 75 per cent of the American public is covered today by voluntary medical insurance.

$$\begin{array}{r} 75\% \\ +20\% \\ \hline 95\% \end{array}$$

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European researchers find that menstruation is most likely to begin on Sunday or Wednesday morning, and least likely to start on Tuesday. They also established that labor begins most frequently on Wednesday just after midnight, and least often in the middle of Monday.

# Capsule Clinics

- In 39 of 47 instances, mobile sperm were found in the cervical canal of women within 90 seconds to three minutes after coitus. Sobero, A. J., and MacLeod, J., Fertility & Sterility 13:184, 1962.

- Of various topical preparations tested, white petrolatum (as a base) afforded the best protection against water. Addition of silicone did not enhance the protective qualities of the base. Steigleder, G. K., and Raab, W. P., J. Invest. Dermatol. 38:129, 1962.

- Adequate amounts of methicillin remain in the serum of most patients eight hours after a concomitant dose of 2 gm. probenecid. Henderson, W. R., et al., Am. J. Med. Sc. 243:489, 1962.

- Asymptomatic bacteriuria was observed in 6.5 per cent of obstetric patients of low financial, educational and social status but in only 1.8 to 2.3 per cent in similar patients of better financial, educational and social standing. Turck, M., et al., New England J. M. 266:857, 1962.

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From Clinical Clippings, 1962.

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# WASHINGTON

### POSTMORTEMS ON KING-ANDERSON

That the medical care issue had been made a political football in the current Congress was charged in an editorial in the Chicago *Sun-Times* on July 19. "Medical care for the aged for those who are unable to meet the additional financial burden ought not to be a football of partisan politics," said the *Sun-Times,* but the administration leaders have made it so. "Now that the Senate has killed the proposal, President Kennedy has made it plain that it will become more so in this year's campaign," the editorial continued. It pointed out that Mr. Kennedy's remarks made at an unusual press conference following the Senate action "were far more notable for the anger they reflected than for temperate adherence to the facts."

### DEFEAT FOR MEDICARE

The New York *Herald Tribune* in an editorial under this heading on July 18 summed it up as follows:

"The Senate's defeat of medicare was a shattering blow to the Kennedy legislative program. But if the President regards it as no more than this, he will be missing half the point. It also was a well-merited rebuff to the Kennedy's legislative tactics.

"Medicare is one of the most complex and controversial issues to come before Congress in years. There can be no simple assessment of its merits, no quick, top-of-the-head choice among the various alternative means of meeting the medical needs of the elderly.

"These needs are increasing; more people live longer—thanks to the skills of the medical profession—and thus are subject for longer periods to the ills of old age while passing more years on what frequently is meager retirement income; at the same time, the cost of medical services is rapidly rising. Serious illness can mean financial catastrophe, with no means of recouping. The problem is a real one.

"But whether the problem is best met by compulsory insurance under Social Security is a tough question. There is a real danger of overburdening the Social Security system itself.

"Though many doctors' opposition has been excessively strident, the fact of this opposition is a factor that has to be weighed—the quality of medical care for the entire population could be undermined if teaching, largely conducted in hospitals, suffers, or if promising young would-be doctors turn away discouraged.

"For better or for worse, medical care depends on the medical profession. And it's worth remembering that the medical profession has given this country the best medical care ever enjoyed by any people anywhere.

*"Though the problem is real, it is less urgent than the political opportunists would have it appear. It first was invested with a false sense of urgency as a tactic in the 1960 Presidential campaign; the drums that have been beaten so insistently for it since have largely been those of political advantage.*

"Old people are not being turned out in the streets to die while medicare languishes. In one way or another their needs are being met. Better ways, certainly, can be devised, but there is ample time to work out the best way.

"The Kerr-Mills Act of 1960 has had a disappointing beginning, but it has not yet had a fair trial; indeed, there has been little official disposition either to give it a fair trial or to make it work, so great has been the effort to take political credit for a new medicare plan.

"Private insurance plans are mushrooming; greatly increasing numbers of persons are being covered by union or company medical benefits extending into retirement. Incomes are rising.

"Yet the Administration insisted, in order to write a political record for the November elections, on proceeding with unseemly haste to a Senate vote.

"Despite the complexity of the issues, not a single day's committee hearings were held. The various plans were never considered in committee; a 'compromise' was hammered out in private meetings and attached as an amendment to a pending welfare bill. This sort of short-cut procedure may be fine for writing political records, but it is no way to write good legislation. The elderly who were thus being used for political purposes have a right to feel insulted.

*"There will be time, after the election dust has settled, to take up the issue again—and to try to get a rational discussion of it, divorced as much as possible from vote-grabbing, from the circus atmosphere of Madison Square Garden rallies, from strong-arm pressures and legislative railroading."*

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[1] Ford, R. A., and Blanchard, K: Journal-Lancet 78.185, 1958

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Across
Missouri

### THE LOBBYING MAY ONLY HAVE BEGUN

With the Anderson-Javits amendment defeated in the Senate, it appears that the issue of hospital and nursing home care for the aged through Social Security is a lost issue in this session of Congress.

That the issue was not lost because of lack of lobbying was stressed in an editorial in the *West Plains Quill* on July 2, and the lobbying from all indications will continue. The editorial titled "1962's Circuit Riders" follows.

"Federal employees are swarming over the land with speeches these days. They are preaching the King-Anderson bill and playing a grim joke on the taxpayers.

"The taxpayer picks up the check—salary and travel expenses—for each of these itinerant lobbyists. The taxpayer also pays someone else to do the job, back in Washington, for which each of the far travelers was hired. The tab runs up pretty fast.

"But what's worse, most of the taxpayers are in the ridiculous position of paying the lobbying expenses of a bill which they do not favor. It amounts to taxation for misrepresentation. At the same time, the taxpayer cannot claim tax deductions for the sums he spends personally to oppose such legislation.

"For this high price the taxpayer receives information of low quality. He hears that the King-Anderson bill will cost but 'pennies a week' and that this compulsory tax scheme is a 'Blue Cross plan for 50 states.' He will hear the speakers lobby against a law of the land, the Kerr-Mills program for the aged.

"These government speakers never mention the great number of private health insurance plans in operation and the growing number of elderly people already covered. They will not mention control over medical practice and standards. They will not mention the restriction on free choice, or the fact that young wage earners will be taxed to pay for the health care of older people who can afford to pay for their own.

"The vagabond speakers will go to any length to spread misinformation about the President's health care plan for the aged. They will travel several hundred miles to address 50 people. They will victimize their audiences by putting phony titles on their King-Anderson speeches. They will form little committees across the country and hold 'workshops.'

"Most of the travelers are assistants or deputy assistants in the Department of Health, Education and Welfare. Labor Department officials are also busy health care speakers, and the King-Anderson bill has been used to dedicate a couple of postoffices.

"Last week's senior citizen rallies featured members of the President's cabinet in cities from coast to coast. This was the Grand Tour. The names of the cabinet members made an impressive list of very expensive lobbyists. All but one of them, the secretary of HEW, were using public funds to campaign for a bill outside the scope of their departments.

"It would be unfair to say that all the government's lobbyists are travelers. Some seldom venture far from their four-room suites in the Executive Office Building, next door to the White House. This crew of government employees, writing under the direction of presidential assistants, has been writing TV scripts, drafting advertisements and otherwise grinding out publicity for the unregistered lobby groups backing the King-Anderson bill.

"The federal lobby is the biggest in Washington. It is also the most costly. But, then, it has plenty of money—a whole Treasury full."

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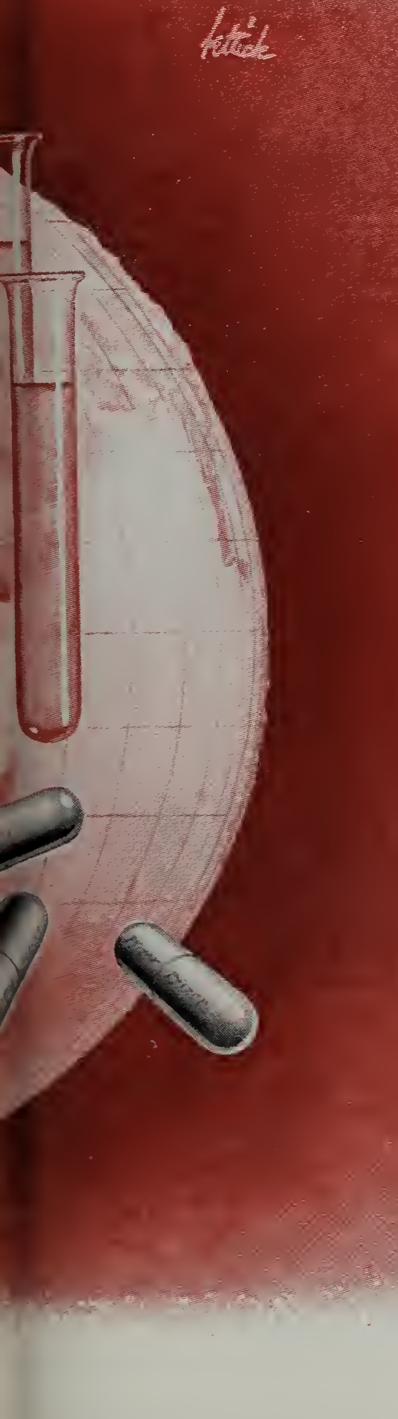

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*More detailed professional information available on request.*

**Boutonneuse fever** is a tick-borne, acute, febrile disease often affecting children. The bite site becomes a small, necrotic ulcer. A striking macular or maculopapular eruption develops on the trunk, palms and soles. Onset is sudden, with chills, high fever, violent headache and lassitude. The high temperature—up to 103° F.—characteristic of both boutonneuse fever and bronchopneumonia, drops rapidly following initiation of Terramycin therapy.

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# Missouri Academy of General Practice

The coming 14th Annual Scientific Assembly of the MAGP offers one of the most interesting and practical programs ever developed by the MAGP Committee on Education. This will be a full two-day affair on Saturday and Sunday, November 3-4, 1962. The Chase Hotel in St. Louis is the place of the entire meeting. Incidentally, the Chase has added a number of major facilities for dining as well as other comforts for their guests. These additions will add considerably to more efficient handling of conventions.

Already some 45 commercial exhibitors have reserved booth space for the meeting. They have faith that a large number of physicians will be on hand and so has the Committee.

The scientific program is complete and will offer 10 hours of postgraduate Academy credit. On Saturday, November 3, the morning program will present a symposium on "Adolescent Medicine." Participants at this session will be: Arthur L. Haskins, M.D., Baltimore, Md.; Cyril M. MacBryde, M.D., and Daniel Sexton, M.D., St. Louis.

The Saturday afternoon session will consist of a symposium on "Office Orthopedic Problems" with the following physicians participating: Emil D. W. Hauser, M.D., and Charles V. Heck, M.D., Chicago, Ill.; Carl M. Fellhauer, M.D., and Arthur H. Stein Jr., M.D., St. Louis.

Sunday morning, November 4, will offer a general session with a variety of subjects to be discussed. Speakers will be: Frank B. Voris, Captain, M.C., USN, National Aeronautics and Space Administration, Washington, D. C.; Charles E. Horton, M.D., Norfolk, Va.; Ian M. Thompson, M.D., Columbia, Mo.; Don Weir, M.D., St. Louis.

The Sunday afternoon program will be a symposium on "Peripheral Vascular Disease." Participants at this session will include: Thomas F. Nealon Jr., M.D., Philadelphia; E. A. Hines Jr., M.D., Oteen, N. C.; K. B. Coldwater, M.D., and Carl A. Moyer, M.D., St. Louis.

The President's Installation Banquet will be held on Saturday night, November 3, on the Chase Roof. The speaker on this signal occasion is Mac F. Cahal, Executive Director and General Counsel of the AAGP. Mac will speak on the subject "Let the Public Behold You," and with the aid of slides will give a report on an interesting new public opinion survey completed for the AAGP by the Opinion Research Corporation of Princeton, N. J.

President Roy Pearse will preside on this occasion. At the conclusion of the evening's formal program he will turn over the gavel to incoming President, Walter Gunn of St. Louis.

Members of the local Arrangements Committee for this 14th Annual Scientific Assembly as appointed by President Pearse are: Walter T. Gunn, Preston C. Hall, Charles O. Metz, Wilbur A. Mullarky and Lois C. Wyatt, all of St. Louis.

Why not make your hotel reservations early?

Figures on medical school students accepted in 1959-1960 showed that 15 per cent were A students, 70 per cent B students and 15 per cent C students. At that same period figures from 53 state and land-grant universities showed ranking of students in their high schools. More than 22 per cent were in the top 10 per cent, more than 45 per cent in the top quarter and more than 79 per cent were in the top half.

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# Woman's Auxiliary

Program is an important part of any organization. The channels into which the energies and talents of its members are directed can demonstrate to the world the vitality, purpose and significance of its very being. Program is something more than the presentation of an interesting speaker or a skit. It relates to long-range objectives for which the organization was formed, the ideals which were set forth as guiding stars.

Mrs. J. Martyn Schattyn

As an Auxiliary our program encompasses many varied spheres of activities which can all be grouped under the heading of service. Our first allegiance is to the medical profession, our country and our own local communities. Any project we undertake, as long as it is for the good of the profession and the enlightenment of our fellow citizens, has a place in our over-all planning. When we are embarking on our program for the coming year let us do so selflessly under the banner of service.

The American Medical Association Education and Research Foundation (formerly AMEF), now offers a broader field in which to work. Besides the original program of seeking funds to assist medical schools, it is now also concerned with loans, scholarships and research grants for medical and scientific purposes. It is hoped that all our counties will continue to work diligently on fund-raising projects for this worthy cause.

Civil defense, it seems, with all its implications, will be a part of our lives for a long time. As the world picture changes, so, too, do the ideas on civil defense. Basically it boils down to preparedness against any kind of disaster and the ability to understand the nature of the threats we face. Civil defense, in the words of our national chairman, Mrs. H. Frederick Stephens of Rhode Island, means "working for peace by strengthening our survival potential, and by learning more about the world around us."

Under Community Service this year two programs new to this committee will be promoted. As a "working project" we are urged to cooperate with the Youth Fitness Examination Program, assisting in the examinations and their follow-through by County Medical Societies. Our educational or "talking project" will be "Medical Quackery." Public awareness and interest in medicine and health problems has caused a fantastic increase in all forms of quackery. It is our obligation to our communities to expose such quacks and to educate the public against them. There is much material available on this subject including pamphlets, books, films and exhibits, all obtainable from the AMA national office.

Health Careers Recruitment, a subject dear to our hearts, will always be one of our priorities. Assisting young people to intelligently select a health profession is one of our most worthwhile endeavors, and all of our counties are urged to continue their wonderful work along this line.

What can be said about Legislation that has not been repeated over and over again? It is the privilege of each one of us, and our duty as well, to scrutinize all proposed legislation and fight for that which is based on the doctrine of freedom and the dignity of the individual. To concern ourselves only with medical legislation is shortsighted. Although we are doctors' wives, we are first citizens. Unless the general political climate of our country is calculated to bring out the best in all its citizens, it cannot be the best climate for medicine or any other profession or line of endeavor. Remember that each little surrender of individual responsibility to government control is a battle lost. On this subject let me leave you with one thought which should make you feel proud. The AMA gives credit where credit is due—to all of you wives—for the "groundswell" of interest shown by the nation's doctors in legislation.

"Membership is the most important link in our organization chain." These are the words of Mrs. Harry F. Pohlman, National First Vice-President and Chairman of Membership. How well we can understand what she is trying to get across to us! We may embark upon many wonderful projects, but unless we have members to work on them how can they be accomplished? We must

*(Continued on page 914)*

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Missouri Medicine

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**JOHN W. BERRY, M.D.,** *St. Louis*

# Respiratory Disease: A Reemphasis of Influenza Vaccine Prophylaxis

A review of the virologic and epidemiologic factors involved in influenza is discussed. The importance of vaccination in prevention is reemphasized. This would seem most timely from reports of the U. S. Public Health Service in indicating an Asian influenza epidemic this year. This presentation was given in part at the regional meeting of the American College of Physicians at Columbia, Mo., in February 1960.

Dr. Berry is Assistant Professor of Clinical Medicine, Washington University School of Medicine, St. Louis; he is general medical advisor, Southwestern Bell Telephone Company, St. Louis, and formerly was Director, Virus Laboratory, St. Louis City Hospital.

In the past two decades progress has been made in the definitive treatment of bacterial respiratory infections. This includes both upper and lower respiratory tract disease of which streptococcal pharyngitis and pneumococcal pneumonia are the outstanding examples. Infections of the lower tract with bacterial organisms, previously regarded as saprophytic or contaminants, remain a major threat, particularly to hospitalized patients with reduced resistance. In spite of antibiotics, many of these infections are unsuccessfully managed. Host factors are as important as the antibiotics in determining a favorable outcome for the patient. It has been clinically recognized that many bacterial respiratory infections are preceded by "minor" respiratory symptoms of the "runny nose" type of cold. In people with lowered host resistance, these minor respiratory illnesses become gravely important. If they could effectively be prevented the subsequent more serious bacterial complications might be avoided.

The "minor" respiratory infections that mimic the common cold are known to be of multi-origin.[1] In recent years with improved technics for virus isolation, an enormous number of agents have been recovered from patients with symptoms of the common cold. An example of these viruses is illustrated in table 1. More than 70 different viruses have been implicated in the clinical picture of acute respiratory disease. This does not include the known bacterial and fungal agents associated with similar symptoms. Much of the clinical confusion is related to the physiology of the respiratory tract itself.[2] The epithelial cells have a limited capacity to react defensively against any noxious agent. The changes in the mucous membranes—congestion, edema, altered secretory activity of the goblet cells and leukocytic infiltration with cellular destruction—may be seen from any cause. Despite the isolation of various virus agents from clinical cases, little is known about their ability to incite disease in large population groups. This laborious epidemiologic investigation will take years to determine.

### TABLE 1
### RESPIRATORY VIRUSES

| | |
|---|---|
| Adenoviruses | 23 types |
| Coxsackie Virus | A—22 types (Herpangina)<br>B—5 types (Pleurodynia) |
| Influenza Viruses | A—4 types (Swine, PR-8, FM-1, A2)<br>B—2 types (Lee, G. L.)<br>C |
| Myxoviruses | |
| Para-influenza Viruses | Influenza D (Sendai)<br>Hemadsorption Virus (HA), Types 1 and 2<br>Croup Associated (CA) |
| Newcastle Disease Virus (NDV) | |
| Others | Canine Distemper (Adams)<br>CCA (Chimp coryza agent)<br>Common Cold Virus<br>Cytomegalic Inclusion Agent (Salivary gland virus)<br>ECHO virus—28 types<br>Giant Cell Pneumonia (Enders)<br>Herpes—Simplex and Zoster<br>JH and 2060 (Mogabgab)<br>PAP (Eaton Agent-PPLO) (?)<br>Psittacosis<br>Respiratory Syncytial Virus |

One respiratory virus that has been studied exhaustively has been the influenza virus. In spite of advances in knowledge that have been obtained, more is needed to establish effective preventive measures against the influenza viruses. This was particularly noticeable during the last pandemics of 1957 and more recently 1959 with the A2 (Asian) virus. With the isolation of this variant of influenza A, it was predicted that it would become pandemic—which it did.[3] It was further suggested before its appearance that the available antibiotics would not alter its pathogenicity—which was true.[4] One of the most interesting chapters in modern epidemiology was the predictability of the A2 influenza pandemic. It is the intent of this paper to review the pertinent points of influenza.

## Epidemiology

It is now recognized that the A2 influenza variant appeared in the Kweichow Province of China and then spread to Hong Kong. It then followed established means of communication to involve Japan, Thailand, Australia and the United States. From the United States it was introduced into South America, Central America and Europe. Within a short period of months this agent spread throughout the world.[5] The three factors responsible were the high attack rate of the virus, the low to absent level of humoral antibodies and the absence of effective quarantine measures. The virus was seeded in the population by aerosol dispersion. This was influenced by crowding and "ignited" in the lower socio-economic areas. Virus was demonstrated from respiratory washings of individuals during 7 to 10 days in fresh cases. Following seeding of the virus, the case attack rate reached epidemic proportions rapidly. In a short period of from 8 to 10 weeks, 65 per cent of the population was infected in some areas of South America. Following the height of the epidemic, the attack rate waned and only isolated cases existed. A predicted second wave occurred with little change in the clinical picture which for the most part appeared mild. It is noteworthy that in Japan, South America, the United States and Europe the greatest attack rate occurred with the opening of schools. School-age children were firmly established as the main contact for virus dissemination. Some beautifully carried out studies by Jordan and Dingle in Cleveland families showed that school children were responsible in the family groups in 83 per cent of the cases of proven influenza.[6] This same group showed that the highest rate was in the 5 to 19 year group and that seeding of the virus occurred primarily as a result of the school contacts.

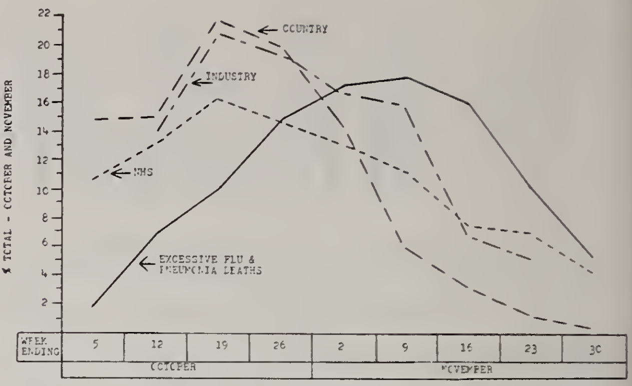

Fig. 1. Morbidity and mortality peaks, Asian influenza, United States, 1957. (Obtained from Langmuir, A. D., Asian Influenza, 1957-58.)

Beginning shortly after the appearance of the virus on the West Coast in the spring of 1957, an increased death rate from all causes was noted. This increase in mortality rate has been noted previously but not emphasized with epidemics of influenza. No other infectious agent in modern times has accounted for more deaths than the influenza virus.[7] Carefully controlled statistics obtained by weekly reports from the major cities and a 10 per cent sampling of all death certificates showed that 88,000 excessive deaths occurred during the fall of 1957 and spring of 1958.[8] Of these 88,000 deaths, 44,000 were due to cardiovascular disease; 20,000 to influenza and pneumonia, and the remaining 24,000 attributable to all other causes. For the most part, the deaths followed closely a U-shaped curve in relationship to the age of the patients (fig. 2). The highest incidence occurred in the quite young, less than 1 year, which exceeded over 300 deaths per 100,000 population to approximate that figure in those over 65. This type of curve has been noted previously for influenza epidemics. Excluded from this generalization was the epidemic of 1917-18 in which the highest number of deaths occurred in the 20 to 30 year group with a W-shaped curve.[9] The correlation of cardiovascular deaths following respiratory tract disease has been noted from studies in other countries, notably Czechoslovakia (fig. 3).

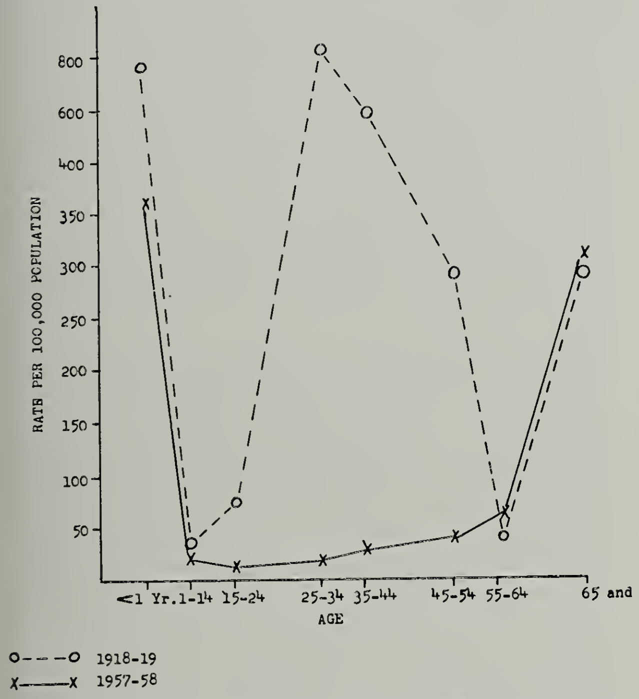

Fig. 2. Influenza and pneumonia mortality rate in the United States by age. (After Collins, S. C.: Public Health Report No. 48 and Dauer, C. C.: Asian Influenza, 1957-58.)

## CLINICAL RECOGNITION

Clinically, influenza is most variable due to differences in severity in the individual. Ordinarily the presence of fever with the sudden onset of symptoms at a time when influenza is known to be epidemic, particularly the fall and winter months, remains the usual picture. Specific clinical signs are lacking. One symptom noted more frequently with the Asian strain was the incidence of a sore throat. It is of interest

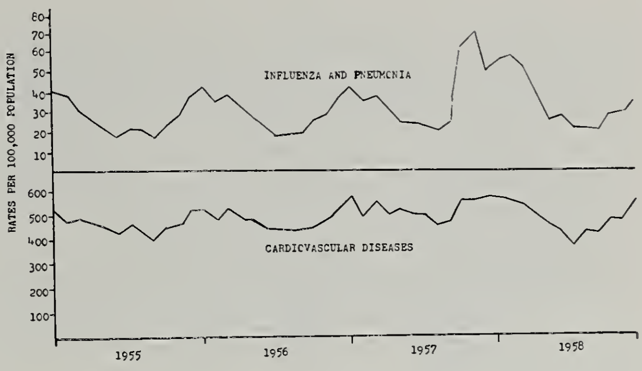

Fig. 3. Mortality from influenza and pneumonia and cardiovascular diseases on annual basis by month in the United States, 1955-58. (Obtained from Dauer, C. C.: Asian Influenza, 1957-58.)

TABLE 2

OCCURRENCE OF FEBRILE CASES (OVER 99.6)

| *Date* | *Number* | *Number With Fever* | *Percentage With Fever* |
|---|---|---|---|
| October, 1956 | 8 | 0 | 0 |
| November, 1956 | 10 | 3 | 30 |
| December, 1956 | 33 | 0 | 0 |
| January, 1957 | 31 | 1 | 3 |
| February, 1957 | 13 | 2 | 15 |
| March, 1957 | 16 | 8 | 50* |
| April, 1957 | 9 | 1 | 11 |
| May, 1957 | 8 | 0 | 0 |
| June, 1957 | 7 | 0 | 0 |
| July, 1957 | 6 | 0 | 0 |
| August, 1957 | 12 | 1 | 8 |
| September, 1957 | 5 | 0 | 0 |
| October, 1957 | 20 | 15 | 75* |
| November, 1957 | 17 | 10 | 59* |
| December, 1957 | 6 | 0 | 0 |
| January, 1958 | 16 | 1 | 6 |
| February, 1958 | 31 | 3 | 9 |
| March, 1958 | 4 | 0 | 0 |
| April, 1958 | 11 | 0 | 0 |
| May, 1958 | 0 | 0 | 0 |
| June, 1958 | 0 | 0 | 0 |
| July, 1958 | 0 | 0 | 0 |
| August, 1958 | 2 | 0 | 0 |
| September, 1958 | 10 | 0 | 0 |
| Total | 275 | 45 | 16 |

* Influenza Virus Isolated

that while the virus is only recoverable for the most part from respiratory secretions, often the respiratory symptoms are minimal. The chills, fever, malaise, headache, nausea and vomiting far outweigh the respiratory symptomatology. The presence of fever alone in an epidemic of respiratory disease is a most significant clue. This is illustrated (table 2) from data derived from more than two years of close study of respiratory disease observed in the medical unit at the headquarters building of Southwestern Bell Telephone Company.

Influenza associated with the clinical picture of pneumonia can be recognized in one of three forms.[10] They are:

A group that has a preceding URI followed by the onset of chills, fever, rusty sputum and pleuritic-type pain. Typical pneumococci most often are found in great abundance in the sputa and often the blood. These patients usually respond promptly to antimicrobial therapy. Virus is rarely found in the respiratory secretions; however, a fair percentage will develop complement-fixing and hemagglutinating antibodies against the influenza virus demonstrating infection.

Another group has URI symptoms followed by fever, cough and malaise. However, they appear much sicker from the beginning. The sputa frequently shows staphylococci or gram positive bacilli. The course is stormy and complications are prone to develop such as unresolved pneumonia and abscess formation. Virus frequently may be demonstrated in the sputa and a higher percentage of patients show serologic evidences of infection with the influenza virus.

A third group of patients may be recognized, but less commonly. Here the onset is dramatically sudden followed by rapid clinical deterioration usually with cyanosis, signs of marked respiratory involvement and frequently an early death. At autopsy, these patients have an acute hemorrhagic pneumonitis. Upon cutting the lungs, blood literally extrudes from the surfaces. This is the classical picture of influenza virus pneumonia. Virus is readily demonstrated from the lung and sputa. It is usually associated with factors known to effect host relationships such at mitral stenosis, rheumatic heart disease, pregnancy, neoplastic or lymphomatous disease. Frequently the case is not recognized clinically because of its acute catastrophic onset and often cardiovascular causes for death are blamed. Many such patients are examined by the coroners physicians because of "sudden" deaths. An interesting study from Cleveland showed the clinical aspects of this group.[11] No known antimicrobial agent can be expected to influence the course of this group inasmuch as bacteria are not demonstrated pathologically.

## Virus Isolation

The principle method for diagnosis of influenza is to demonstrate the virus. This can be done by passage of the respiratory washings in embryonated hen's eggs and testing for hemagglutination. Tissue culture methods have been adapted but do not offer the specificity that egg passage provides. The cytopathogenicity is discrete without histologic autolysis. A method using both tissue culture and egg passage has been suggested by the Public Health Service.[12] Respiratory secretions obtained as early as possible from a suspected case are treated with penicillin and streptomycin. The treated respiratory samples are then inoculated on monkey kidney cells and into embryonated hen's eggs. The employment of two different host systems, namely, monkey kidney cells and embryonated hen's eggs, provides greater recovery of the influenza virus.

To prove infection, serologic evidence of a host reaction should be demonstrated, as well as recovery of virus. Serologic methods are those that measure hemagglutinating-inhibiting (HI) and complement-fixing (CF) antibodies to the influenza virus. If both types of serologic tests are used, greater chances for the specific influenza infection are apparent. The CF antibodies are type and strain specific and more apt to occur in a given infection than are the HI antibodies.[13] Recently, it has been shown that antibodies to the influenza viruses can be treated with fluorescent dye technic.[14] Unknown secretions that might contain virus are incubated with this fluorescent-tagged antibody. If antigen in the form of virus is present, the virus particles will be coated by the specific antibody. With an ultraviolet light source fluorescence can be detected with otherwise routine microscopy. The use of the fluorescent antibodies for the detection of influenza virus is only in the exploratory phase. The fluorescent antibody method has interesting possibilities of making available to the clinician an early method for the diagnosis of influenza. It also offers a prospective rather than a retrospective method for such diagnosis.

Histologic changes in the respiratory tract due to influenza virus have been recognized by laboratory workers. With training, the discreet changes and the inclusion bodies may be of aid in the recognition. The method has been reviewed in light of experiences with exfoliative cytology. The method does not have the potential that the fluorescent technic does.

## IMMUNIZATION

A great deal of discussion has been concerned with specific prophylaxis. This, in general, consists of the use of inactivated influenza virus for a vaccine. Experiences with a live vaccine that may be instilled into the nose have been reported by a Russian group,[15] as well as in this country by Dr. Meiklejohn of the University of Colorado.[16] The result of the use of live nasally instilled vaccine is still experimental. Early results do not indicate any superiority over the conventional methods of parenteral vaccine.

Since 1943, field trials conducted principally by the Armed Forces Epidemiologic Board have shown the effectiveness of the inactivated influenza vaccine in protecting challenged population groups. The protection ratios have varied from 1.1 to 8.1 for influenza A infections. With influenza B infections, the protection ratios have varied from 1.6 to 12.9.[17] The difference in the protection ratios is due to major antigenic shifts within a previously prevalent influenza virus. When such antigenic shifts occur in the infective agent the population susceptibility is greater for the recently emergent variant. This was particularly true of the A2 virus where practically all population groups showed no antibody protection as measured by the absence of CF and HI antibodies. Subsequently in Holland and later in this country, it was shown that in older-aged people antibodies were found. This was noted after challenge with small dosages of a polyvalent influenza vaccine not containing the A2 antigen. This evidence suggested that a variant of influenza A similar antigenically to the Asian strain had infected those people earlier in life. This has led to speculation that the 1889 epidemic of influenza was due to this closely related, if not identical, strain of influenza A virus. This has given credence to Francis and Davenport's feeling that the influenza viruses have a finite antigenic structure.[18] Consequently, if a finite relationship exists, the incorporation of various strains of influenza A virus in a vaccine should give protection sufficient to cover any future major antigenic shifts. It is now recognized that these shifts occur at approximately ten year intervals in the A group. The fact that the A2 virus has been only in existence since 1957 indicates that continued vaccination is still indicated (table 3).

TABLE 3

INFLUENZA VIRUS—ANTIGENIC CONSTITUENTS

| *Antigens* | *Family* | *Epidemics* |
|---|---|---|
| Type A | Swine—(A/Swine/31 | 1930-31 (?1890)<br>(?1918-19) |
| | PR-8—(A/PR-8/34) | 1932-43 (6 epi.) |
| | FM-1—(A/FM-1/47) | 1947-53 (4 epi.) |
| | Asian—(A/Jap-305/57) | 1957-60 (?1898) |
| Type B | Lee—(B/Lee/36) | 1936-52 |
| | G.L.—(B/G.L./54) | 1954 |
| Type C | JJ/50 | 1950 |
| Type D (Para influenza) | Sendai/52 | 1952 |

The dosages, routes and schedules of inoculation have been reviewed.[19] It is apparent that immunization is dependent upon high levels of circulating HI antibodies. Antibody levels of more than 100 give adequate protection.[18] The initial stimulus to specific antibodies is related directly to the size of the antigenic mass given. This has been shown in the case of the A2 virus to depend upon a dose minimally of 400 CCA (chicken cell agglutination) units. If prior contact has been present, less antigenic mass is necessary for the challenged rise in the antibody level. Because of the fairly universal seeding of the A2 virus throughout population groups, it would seem that the 200 CCA units currently incorporated in the polyvalent commercial vaccine is adequate. The incorporation of other influenza A and B antigens to give a broad base is likewise recommended.

To illustrate the phenomenon of so-called "original antigenic sin," table 4 is shown. The study demonstrates the degree of antibody response to challenge in a previously nonvaccinated group. While this work was done in 1948 prior to the A2 virus, it corresponds to the type of antibody response anticipated with the Asian variant now. The A prime virus (FM-1 strain) which had been isolated one year previously, was fairly well seeded when inoculation was done. The greater antibody levels occurred with the "older" antigenic strains—the PR-8 and Lee. There is a relationship between the antibody responses measured by the HI antibodies as related to the size of the inoculated antigenic mass. Those people that received 1.0 cc. subcutaneously did better in terms of mean antibody responses than those who receive 0.1 cc. intradermally. This is evidence that 1.0 cc. subcutaneous dosage is preferred to the smaller dosage used in the intradermal route. The fall off in

TABLE 4

INFLUENZA VACCINE*
"Nonimmunized" Air Force Recruits

| | | | | H. I. Antibody Response‡ | | | Persons With Rise in Titer | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Antigen*† | *Route* | *Dosage* | *No.* | 0 | 2 WEEKS | 8 WEEKS | 2-4 FOLD | 8-16 | OVER 32 | TOTAL NO. PER CENT |
| PR-8 | S.C. | 1.0 | 182 | 60 | 272 | 215 | 94 | 58 | 10 | 162 (89) |
| FM-1 | S.C. | 1.0 | 182 | 25 | 113 | 92 | 99 | 62 | 8 | 169 (93) |
| Lee | S.C. | 1.0 | 182 | 51 | 343 | 271 | 76 | 67 | 29 | 172 (95) |
| PR-8 | I.D. | 0.1 | 207 | 103 | 278 | 207 | 125 | 37 | 1 | 163 (79) |
| FM-1 | I.D. | 0.1 | 207 | 37 | 98 | 73 | 139 | 27 | 2 | 168 (81) |
| Lee | I.D. | 0.1 | 207 | 67 | 252 | 177 | 121 | 54 | 7 | 182 (88) |
| PR-8 | S.C. | 0.1 | 195 | 74 | 181 | 134 | 111 | 31 | 2 | 144 (74) |
| FM-1 | S.C. | 0.1 | 195 | 24 | 66 | 48 | 142 | 25 | 2 | 169 (87) |
| Lee | S.C. | 0.1 | 195 | 57 | 206 | 151 | 110 | 45 | 11 | 166 (85) |

* Wetherbee, Donald, and Berry, J. W. Previously unpublished data.
† Vaccine Potency
PR-8—450 CCA/ml.
FM-1—400 CCA/ml.
Lee—300 CCA/ml.
‡ Reciprocal of Geometric means

antibody levels at eight weeks supports the contention that in poor risk patients, more frequent challenge is needed during the respiratory season. It would seem logical that such individuals should receive two or three vaccine injections beginning early in the fall.

Regarding the frequency of vaccination, it was suggested by Meiklejohn that yearly inoculations may be superfluous. This is a controversial subject. In view of the rather striking properties of the A2 virus to cause infection as witnessed by two major pandemics within three years, frequent antigenic stimulation would seem indicated. Ideally, vaccination should be practiced at least every other year on the population as a whole. In "poor risk" patients, more frequent immunization is in order. The amount of vaccine needed to maintain the HI antibodies over 100 is unknown, but undoubtedly varies from person to person. A fair estimate would be 100 CCA units which represents 0.5 cc. of the commercial polyvalent vaccine.

Who should receive the vaccine? Certainly all patients with chronic illnesses, such as rheumatic heart disease and other forms of cardiovascular involvement, diabetes and chronic lung disease, are prime candidates. These groups number something like 21,000,000 individuals in the United States. If one adds the 3,500,000 pregnant women present at any one time, a considerable number of individuals exist with enhanced susceptibility. This number is further increased by adding the so-called essential industries such as medical personnel, the police and fire departments, the transportation and communication industries. These groups comprise over 5,000,000 people. The individuals most likely to be involved in the spread of the disease should most certainly be vaccinated. This would include all the school-age children of which there are 42,700,000 from the kindergarten through high school in the United States. No one would dispute the inclusion of these groups for a preventive program. However, few have advocated broader vaccination. The frequency of sudden death and the inability to predict what healthy person might be affected suggests broader recommendations. I would personally like to include all individuals with the exception of those known to have an allergy to eggs as potential candidates for vaccination. One of the difficulties in recommending a broader program has been the acceptance of the vaccine by the public. This indifference can be often traced directly to the medical profession. This is a definite obstacle. The practicing physicians need to educate their patients as to the use of influenza vaccine. Isolated instances of reactions to the vaccine have been published. Some of these have been fatal. However, they represent a minute percentage of the enormous number of deaths attributed to the virus. Table 5 shows graphically experiences with influenza vaccine reactions. This was a study comparing the subcutaneous and intradermal routes of administration. As is evident the number of reactions was greater with the subcutaneous route. It is to be emphasized that these patients were

TABLE 5

INCIDENCE AND TYPES OF REACTIONS TO INFLUENZA VACCINE*
(1949—LACKLAND AFB)

| | | *(S.C.)* | *(I.D.)* |
|---|---|---|---|
| Total vaccinated | 1048 | 646 (61%) | 402 (39%) |
| Total observed for reactions | 740 | 462 | 278 |
| No. with reactions (1st 4 days) | 242 | 164 (67%) | 78 (33%) |
| No. febrile reactions (T. over 99°) | 71 | 51 (71%) | 20 (29%) |
| Local tenderness | 169 | 116 | 53 |
| Malaise and fatigue | 31 | 15 | 16 |
| Headache | 29 | 15 | 14 |
| Muscle pain | 13 | 10 | 3 |
| Sore throat | 10 | 8 | 2 |
| Coryza | 24 | 14 | 10 |
| Vomiting/Diarrhea | 4 | 2 | 2 |

* Wetherbee, Donald, and Berry, J. W. Previously unpublished data.

followed every 12 hours for the first two days and all types of reactions were itemized. It is evident that in groups in which less attention is paid, most of these would be unreported.

In summary, influenza will continue to prove a problem in preventive medicine. The concept that the infection is a minor disease must be abandoned. It is the responsibility of the physician to convince the public of the facts regarding the seriousness of influenza. Certainly, research into the genetics and chemistry of the virus is important, but the known facts considering the clinical picture must be realized. If the public is informed on the value and worthiness of the vaccine they will demand its use from the medical practitioner. This undoubtedly will minimize the dangers of the modern scourge.

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Pennies are going to be cheaper. On July 2 the House voted to stop using tin in pennies. Copper has and will continue to make up 95 per cent of the cent, but zinc will be used for the other 5 per cent. Tin has cost $1.16 per pound and zinc costs 12 cents a pound.

ERNEST LORENC, M.D., *and*
WILFRED E. WOOLDRIDGE, M.D., *Springfield*

# An Endemic Focus of Favus in South Central Missouri

FAVUS IS AN unusual specific fungous infection of the skin, usually localizing in the scalp. In this country it occurs primarily in immigrants from central and southeastern European countries and in endemic foci previously reported.[3, 4] This paper is concerned with the report of two cases of favus and occurrence of other cases of the same disease in three generations of one family living in South Central Missouri, indicating an endemic focus not previously reported.

**Two cases, with a third as an addendum, of favus are reported and it is indicated that a new endemic focus may be present in South Central Missouri.**

**Drs. Lorenc and Wooldridge are in private practice in Springfield, specializing in dermatology and skin cancer therapy.**

## CASE REPORTS

Case 1. The first patient was a 5 year old girl. For three or four years the mother had noted dryness, scaling and itching of varying degree over the crown and the posterior portions of the scalp. Different shampoos had been of little benefit. No other members of the family were similarly affected.

Examination revealed small scales loosely attached to the scalp, many in a perifollicular location. The scales did not leave a raw surface when removed. There was an occasional pustule. Alopecia was not prominent. Wood's light examination revealed a faint green fluorescence of involved hairs and scales.

Potassium hydroxide examination of fluorescent hairs showed large spores, which were not in chains, and many air bubbles. Cultures of scales on Sabouraud's medium grew typical colonies of Trichophyton schoenleini.

With the administration of griseofulvin, 250 mg. twice daily, improvement was evident at the end of one week. Within eight weeks the scalp was entirely clear.

During the course of treatment other relatives were questioned concerning scalp disease. It was in this way that the second patient was discovered, revealing a family with a history of three successive generations of what was probably favus of the scalp.

Case 2. Mrs. D. M. was a 20 year old woman who had been in good health except for scalp disease of six years duration. At the age of 14 years she noted the onset of an increasingly severe, slowly spreading, itching, scaling eruption of the scalp. There were at times pustules associated with pain. Loss of hair was slowly becoming more apparent. She had never noted any lesions other than those of the scalp. Therapy in the past had consisted of numerous topical preparations, none of which had any beneficial effect.

Examination of the scalp revealed a scarring alopecia over the crown and right parietal areas (figs. 1 and 2). Hair loss was marked but occurred in a spotty distribution. There were crusts and erythema present but no typical scutulae were ap-

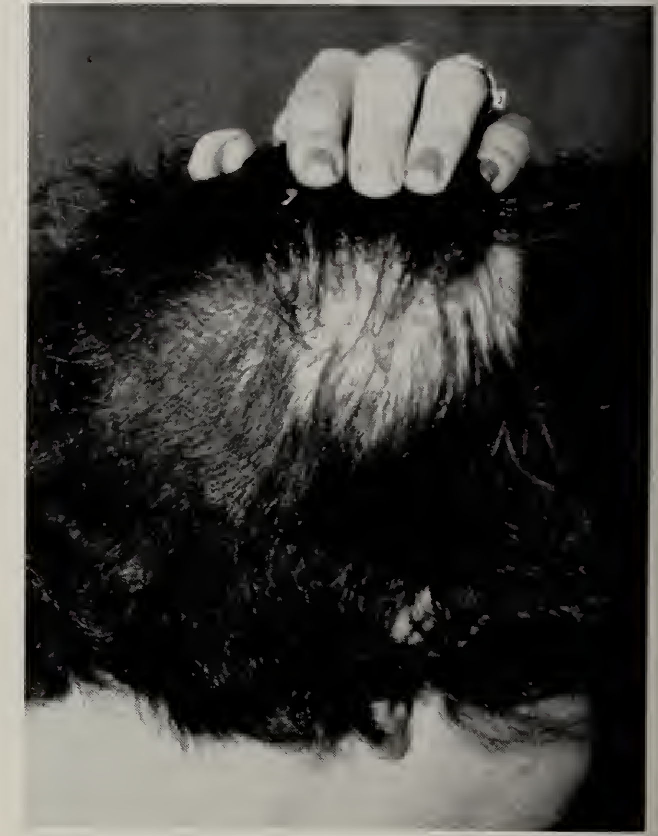

Fig. 1. Examination of the scalp revealed a scarring alopecia over the crown and right parietal areas.

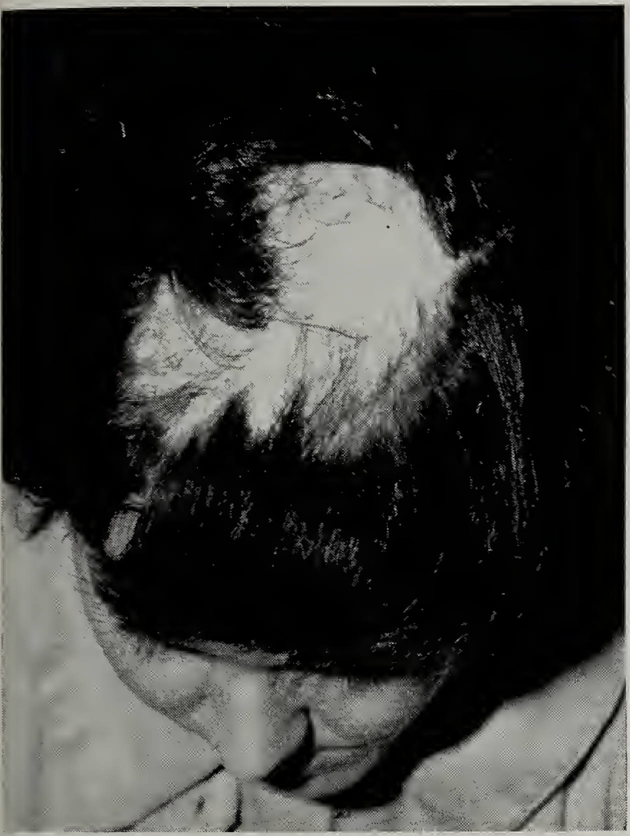

**Fig. 2. Hair loss was marked but occurred in a spotty distribution.**

parent. Examination under Wood's light showed a gray-green fluorescence. Cultures of crusts and hair grew out typical colonies of Trichophyton schoenleini in two weeks.

Therapy consisted of griseofulvin, 500 mg. twice daily. Within one month erythema had completely disappeared and scaling had almost completely stopped. There was no longer any itching or burning of the scalp. The alopecia was unchanged. Griseofulvin in the same dosage was advised for an additional month. She did not return for follow up examination and is presumed clear of her scalp infection.

## Discussion

Favus is a fungous infection of the skin characterized by the formation of scutulae which are scales of varying size, adherent at the center and curling at the edges. Pustules, often perifollicular, are an inconstant feature. Incomplete but permanent alopecia occurs slowly over the years as the disease progresses, causing the scalp to have a moth-eaten appearance. There is a peculiar characteristic mousy odor to the scalp. Hairs and scales in which the fungus is growing fluoresce a light greenish color under Wood's light. Culture of the involved hair or scales on Sabouraud's medium grows out characteristic colonies of Trichophyton schoenleini.

The occurrence of all these specific characteristics in any one person is the exception rather than the rule today. Hygienic conditions in the worst of slums and backward country areas are better now than a generation ago. Favus, which thrives under conditions of filth and exhibiting the classical signs and the symptoms noted, has in recent years shown not only a decreased incidence but a change in its clinical patterns.[2]

Oscar Heim in 1957 reported two cases in Armed Forces personnel that simulated seborrheic dermatitis. It is of interest to note that both cases were from endemic areas, one in Kentucky and the other from southern Arkansas. These young men had seen many physicians without having the proper diagnosis even suspected. The histories of our two patients showed that they had gone three and six years respectively without a diagnosis of fungous infection of the scalp being considered. Our first patient is a niece of the second and, while visiting, had used her brushes and combs. It is presumed, therefore, that the child was infected from the adult.

Figure 3 shows the incidence of what was probably favus of the scalp in three generations of the family of our second patient. It is not unreasonable to assume that some of these people had sought medical help at one time or another but there is no hint in the history that a fungous etiology was ever considered.

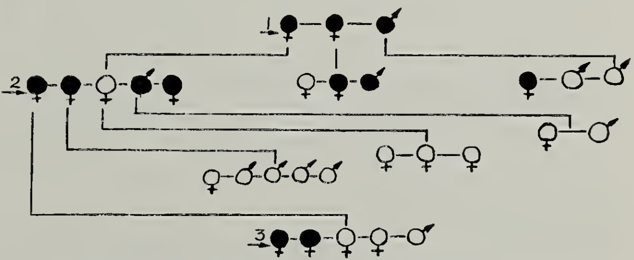

**Fig. 3. Solid black symbols indicate affected members of the family of the second patient. 1. Grandmother, 2. mother, 3. patient.**

Having established the fact that favus is endemic in the Ozarks region of Missouri, it is presumed other physicians in the state will be seeing patients with this disease. If the diagnosis is made in time and proper treatment given, permanent disfiguring alopecia can be prevented.

## Summary

Two cases of favus of the scalp are reported as evidence indicating a new endemic focus is present in South Central Missouri.

It is stressed that any scaling or pustular disease of the scalp causing a loss of hair that does not respond to routine measures must be submitted to proper diagnostic procedures to rule out a chronic fungous infection such as favus.

With the prevalent population movement from country to city, the presence of favus in our cities can be expected.

## Addendum

Since this paper was submitted for publication we have seen a third such patient, an 18 year old female, the sister of our second case. This girl is a resident of Kansas City, Missouri, but spent her childhood in the endemic area referred to. She is married and has a healthy son 12 months old. Since earliest childhood she has had an itching and scaling scalp. This has been especially prominent during her teen-age years. It has never been relieved by any medication given to her by any physician although she had received no griseofulvin.

On examination there was fine adherent scaling, both perifollicular and independent of follicles. There were no pustules. Redness was fairly sharply marginated to the affected areas. Hair loss was not marked but thinning was noted in the involved areas. Examination under Wood's light showed a faint grey-green fluorescence of many hairs. Potassium hydroxide preparation showed chains of spores and mycelia occurring within the hair shaft. Cultures at the time of submission of this addendum are compatible with Trichophyton schoenleini.

As our summary implies, the disease may be found where it is looked for.

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In 1933, the year when life expectancy in the United States rose to 59 years, Amos Alonzo Stagg, the first athletic director coach to have academic rank (associate professor at the University of Chicago), retired at the age of 70. Mr. Stagg celebrated his 100th birthday on August 16. In 1914 the athletic field at the University of Chicago was renamed Stagg field and in that same year the Yale Bowl, seating 80,000 was built, the first of the giant college stadia.

**EDMUND A. SMOLIK, M.D.,** *and*
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# Cerebral Angiography With a New Contrast Medium (Conray)

**The chemical, pharmacologic and biologic properties of Conray are outlined and a series of 110 cerebral angiograms using this medium is reported.**

**Dr. Smolik and Dr. Nash are in the Department of Surgery (Section of Neurosurgery), St. Louis University School of Medicine.**

CEREBRAL ANGIOGRAPHY as a diagnostic technic is now widely employed. Since Egas Moniz's original work,[1] many contrast media have been utilized. The ideal intravascular contrast medium should provide excellent radiographic visualization and at the same time be free of untoward systemic tissue reactions.

In 1956, the authors related their experiences with sodium diatrizoate—50 per cent, in cerebral angiography.[2] However, the search for the ideal medium continues to interest all concerned with this diagnostic technic.

We wish to report our experiences with meglumine iothalamate—60 per cent (Conray)* as a cerebral angiographic medium. We have used this substance over the last nine months.

## LABORATORY DATA

The pharmacologic, chemical and biological properties of Conray indicated that it might be useful in cerebal angiography.

## CHEMICAL DATA

Conray is an aqueous solution of meglumine iothalamate. The chemical structure is shown in figure 1. This substance possesses a molecular weight of 614. Its iodine content is 62 per cent.

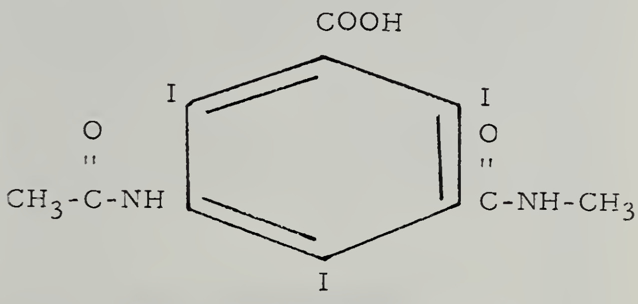

Fig. 1. Chemical structure of Conray.

The physical properties of Conray make it ideal as a contrast medium. It has a low viscosity and a high degree of solubility. It is completely dissolved in a clear solution at normal room temperature.

## BIOLOGICAL DATA

Intra-arterial injections of Conray in experimental animals were carried out to determine its effect upon the arterial structure.

*Procedure.*—Male albino rabbits weighing between two and three kilograms each were used. Three rabbits received carotid artery injections of Conray. Control rabbits received injections of pyrogen free saline.

The rabbits were lightly anesthetized with myotal and the hair of the neck was closely clipped. The rabbits were then restrained in the dorsal position. Under aseptic conditions, a section of the carotid arteries was exposed and a No. 22 needle inserted into the artery.

Each rabbit received three injections of ½ cc. volume of the respective preparations, with a 10 minute pause between injections. Later, this procedure was repeated on a second group of experimental animals. In this group, each animal was injected with 5.0 cc. volume of the respective preparations. Each animal received three such injections. In each animal there was a 10 minute pause between injections.

All animals were then sacrificed according to the following schedule:

A) Two rabbits of each test group were sacrificed immediately following the injection.

B) One rabbit of each test group was sacrificed 24 hours following the last injection.

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* Conray was supplied by the Department of Medical Research, Mallinckrodt Chemical Works, St. Louis 7, Missouri.

All rabbits were sacrificed by means of exsanguination.

*Results.*—Sections of the carotid artery at the site of the previous injections were excised and fixed in 10 per cent neutral formalin solution. The microscopic examination of the excised sections of the carotid artery revealed that the arteries injected with Conray showed no microscopic evidence of endarteritis or periarteritis. There was no microscopic evidence to differentiate the arteries injected with Conray from those receiving the saline injections.

## Pharmacologic Data

An assessment of the effect of Conray upon the blood brain barrier of the experimental animals has been reported.[3] The procedure employed consisted of the rapid injection of a 25 cc. volume of a contrast medium into a common carotid artery of a dog. Following this, the animal had a second intra-arterial infusion of trypan blue dye. The animal was then sacrificed by exsanguination and the brain was removed.

This was repeated using various contrast media.

The degree of visible brain staining served as an index of the degree to which the contrast medium had increased the permeability of the blood brain barrier. Figure 2 is a pictorial record of the minimal degree of staining present following the injection of Conray as compared to sodium diatrizoate, 50 per cent, and saline, intra-arterial injections.

## Clinical Data

Conray was used as the contrast medium in

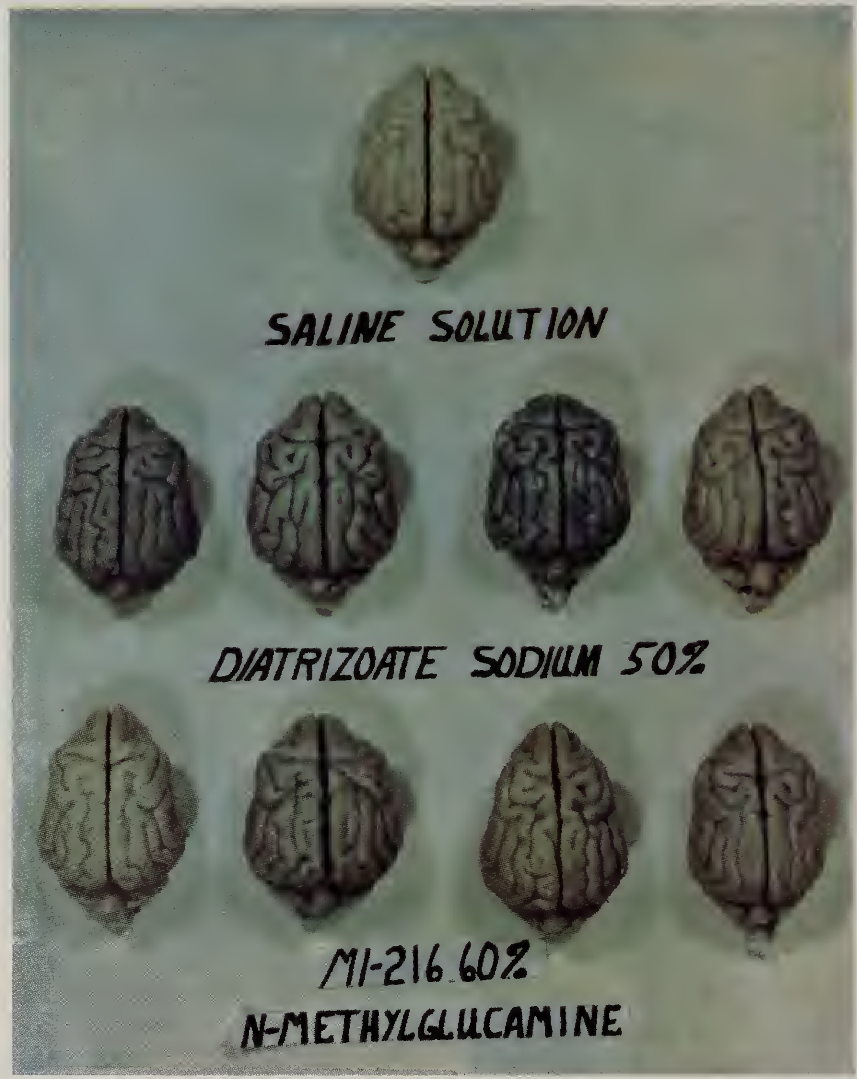

Fig. 2. Relative degree of cerebral staining by trypan blue dye following the carotid injection of saline, sodium diatrizoate—50 per cent, and Conray.

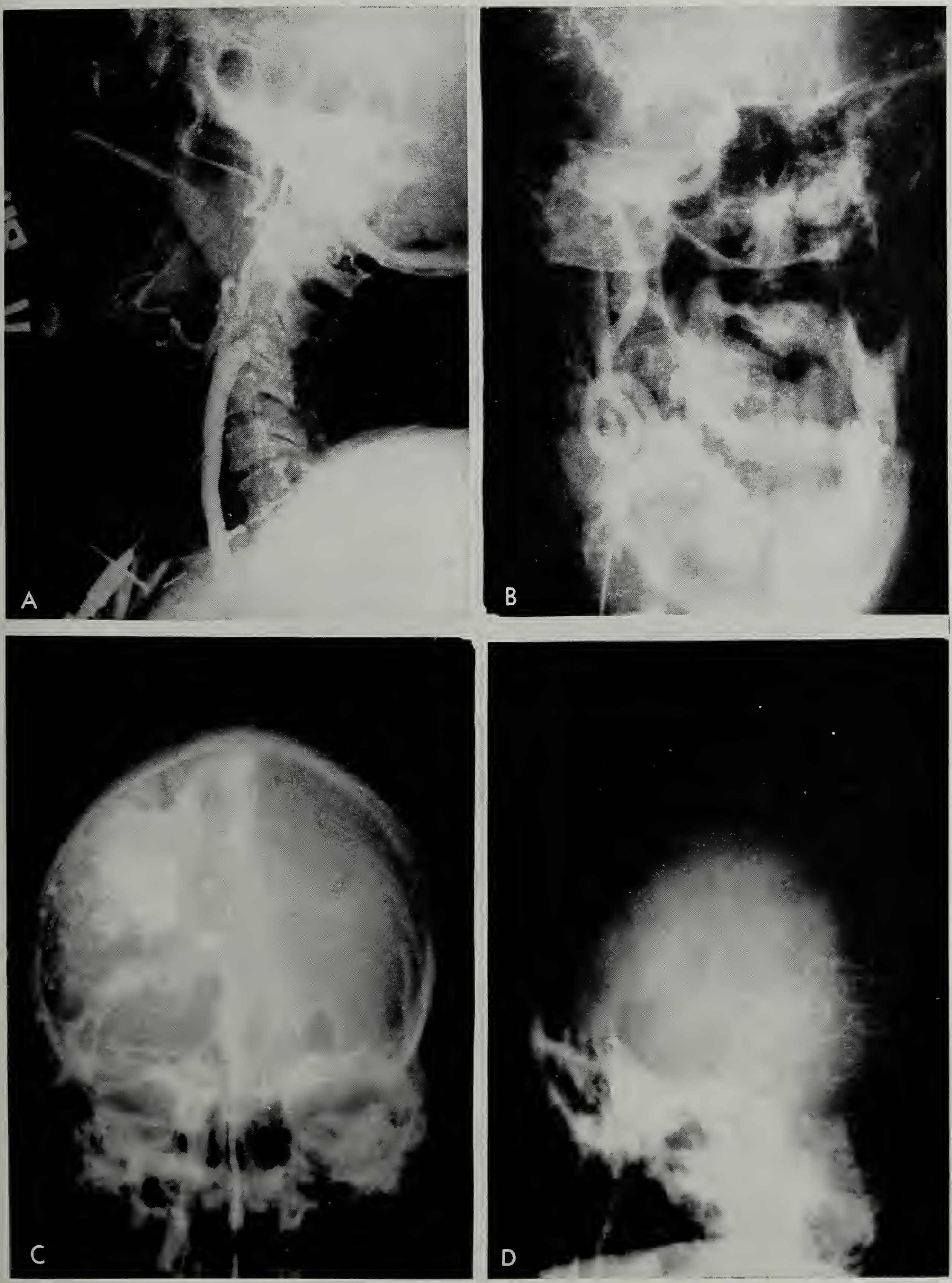

Fig. 3. A, A thrombosis of the right internal carotid artery, cervical portion (Conray). B, A redundant internal carotid artery (Conray). C, An arteriovenous malformation of the right parietal area (Conray). D, A saccular aneurysm of the right middle cerebral artery (Conray).

110 patients on whom we carried out cerebral arteriograms during the last nine months. In all cases, the procedure was carried out under local novocaine anesthesia with intravenous demerol and phenergan supplements.

In all, a total of 148 arteries were cannulated (table 1). There were a total of 337 intra-arterial injections of Conray. The volume of single rapid injections of Conray varied from 10 cc. to 100 cc. (brachial retrograde arteriogram) per patient. The average volume of Conray used per injection was 10.9 cc. The average total dose per patient was 33.3 cc.

TABLE 1

CEREBRAL ANGIOGRAPHY WITH CONRAY
(June, 1961—March, 1962)

| | |
|---|---|
| Total Patients | 110 |
| Carotid, Vertebral and Brachial Arteries Injected | 148 |
| Number of Intra-Arterial Injections | 337 |
| Average Volume Per Injection | 10.9 cc. |
| Average Total Volume Per Patient | 33.3 cc. |
| Total Amount Injected | 3,670 cc. |

The total amount of Conray injected in this series of 337 intra-arterial injections was 3,670 cc.

Each patient was observed for signs of untoward local or systemic reactions of hypersensitivity. In no patient did we observe any circulatory, central nervous system abnormality or autonomic response indicating a hypersensitive reaction to the drug.

The cerebral angiograms in this series demonstrated the vascular lesions of intracranial aneurysm, cerebrovascular thrombosis, arteriovenous malformation and internal carotid artery redundancy, as well as the vascular displacements produced by brain tumors, brain abscesses and subdural hematomata.

In all instances, this contrast medium gave an excellent degree of radio-opacification. Figures 3, A, B, C and D demonstrate some of the pathologic vascular changes observed in this series of cerebral angiograms.

We have been impressed by the absence of signs of discomfort associated with the actual intra-arterial injection of Conray. When other contrast media were used it was commonplace for the patient to verbally complain or to manifest other signs of discomfort such as head rotation or facial grimacings, at the time of the actual intra-arterial injection. In this series such manifestations of discomfort were not observed.

In addition, it has been our impression that the patient's subjective complaints of local cervical discomfort associated with periarterial extravasation of contrast medium was much less marked with Conray than in patients in whom other substances were employed.

## Summary

1. This report records our experience with the use of Conray as a cerebral angiographic contrast medium.

2. This substance has been employed in a series of 110 cerebral angiograms. This medium has given excellent radiographic contrast quality without untoward local or systemic reactions.

3. The chemical, pharmacologic and biologic properties of Conray are outlined.

100 N. Euclid Ave.

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There were federal deficits in 26 of the last 33 years and the national debt has grown from $1.3 billion dollars in 1900 to $286.3 billion in 1960 and an estimated $298.2 billion in 1962.

GEORGE A. ULETT, M.D.; H. M. HARDWICKE, M.D.;
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# Intensive Psychiatric Treatment Hospitals And Missouri's State Mental Hospitals

## *A Study of the Relative Effectiveness*

### INTRODUCTION

RECENTLY, the question of the effectiveness of the small short-term intensive psychiatric treatment hospital as compared to that of the large mental hospital has received a great deal of attention. Those authorities who are charged with the responsibility of mental health seem to feel —if one can accept with any confidence whatever the final report of the Joint Commission on Mental Illness and Health[1]—that the large mental hospital is not the most effective setting for the treatment of mental illness. Rather, they insist, the small intensive treatment hospital is much more effective in treating mental illness and in returning the mentally ill to their homes and communities.

As Dr. George J. Wayne, Director of the Edgemont Hospital in Los Angeles, points out: "This (the economies of mass production) applies to the production of automobiles, but no one can mass-produce mental health. The goal of a psychiatric hospital, even when outlined in purely economic terms, is to facilitate a patient's improvement, shorten the length of his hospitalization and restore him to his place in the community. These valid economies in the case of the mentally ill can best be promoted in small psychiatric hospitals. . . ."[2]

The idea of the intensive psychiatric treatment hospital is not new to the State of Missouri. Twenty-four years ago, in 1938, the Malcolm Bliss Mental Health Center was built by the City of St. Louis for short-term intensive treatment of mentally ill citizens of St. Louis. In 1954, the Psychiatric Receiving Center operated by The Greater Kansas City Mental Health Foundation, first opened its doors for the same general purpose for the citizens of Kansas City. Together, in 1961, these two short-term intensive psychiatric treatment centers served approximately 40 per cent of all mentally ill patients admitted to public mental hospitals in the State of Missouri. The other 60 per cent of Missouri's mentally ill living in rural areas and smaller urban centers throughout the state were treated in the five state mental hospitals.

This paper presents a comparative study of the treatment results of patients admitted to these two types of hospitals.

**Comparisons are made between the Malcolm Bliss Mental Health Center and the Greater Kansas City Mental Health Foundation with the five state mental hospitals in Missouri including length of stay in the hospitals, number of admissions, number of patients released to communities and readmissions.**

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**This study was conducted through the facilities of Community Studies, Inc., of Kansas City, and the statistical laboratory of the Missouri Division of Mental Diseases. Assistance was given by Marvin Nebel, Research Analyst for the Missouri Division of Mental Diseases, the staff of the Greater Kansas City Mental Health Foundation, the Malcolm Bliss Mental Health Center of St. Louis and the staffs of the five state mental hospitals located in Fulton, St. Joseph, Nevada, Farmington and St. Louis.**

### METHOD

*The Study Samples.*—The study included all patients who were first admissions during October and November, 1958, to the two short-term intensive treatment centers, on the one hand, and the five state mental hospitals, on the other. Excluded from the study groups were all those patients who had been transferred from the intensive treatment centers to the state hospitals. The actual comparisons, then, were made between 144 patients from the short-term intensive treatment centers and 268 patients from the five state mental hospitals.

TABLE 1

NUMBERS OF PATIENTS BY DIAGNOSIS IN THE TWO STUDY GROUPS

| | *PRC and Bliss* | | *State Hospitals* | |
|---|---|---|---|---|
| *Diagnosis* | NO. | PER CENT | NO. | PER CENT |
| Total | 144 | 100 | 268 | 100 |
| Acute Brain Syndrome | 17 | 12 | 1 | |
| Chronic Brain Syndrome | 25 | 17 | 82 | 31 |
| Mental Deficiency | 3 | 2 | 24 | 9 |
| Affective Reactions | 9 | 6 | 9 | 3 |
| Schizophrenic Reactions | 35 | 24 | 58 | 22 |
| Personality Disorders | 15 | 10 | 47 | 18 |
| Psychoneuroses | 16 | 11 | 31 | 12 |
| Alcoholism | 15 | 10 | | |
| Involutional Psychotic Reactions | 2 | 1 | 6 | 2 |
| Unknown | 7 | 5 | 10 | 4 |

Table 1 shows the diagnostic breakdowns of the two groups of patients. The discrepancies in the proportions of patients in the various diagnostic categories, as shown in table 1, would seem to suggest that the two types of hospitals accept different kinds of diagnostic cases. As will be shown later, however, comparisons by diagnosis indicate that these discrepancies do not invalidate the results of the study.

TABLE 2

AGE BREAKDOWN OF THE TWO GROUPS OF STUDY PATIENTS

| | *PRC and Bliss* | | *State Hospitals* | |
|---|---|---|---|---|
| *Age Group* | NO. | PER CENT | NO. | PER CENT |
| Total | 144 | 100 | 268 | 100 |
| 0 to 18 years | 4 | 3 | 24 | 9 |
| 19 to 39 years | 67 | 47 | 97 | 36 |
| 40 to 64 years | 51 | 35 | 88 | 33 |
| Over 64 years | 15 | 10 | 58 | 22 |
| Unknown | 7 | 5 | 1 | 0.3 |

As shown in table 2, an obvious difference exists in the ages of the patients in the two study groups. However, as will be shown, the age difference does not invalidate the results of the study.

*Criteria of Effectiveness.*—In deciding upon the criteria to use in evaluating the comparative effectiveness of the two types of hospitals, two assumptions were made: (1) in light of present knowledge and understanding of the cause and treatment of mental illness, it is recognized that mentally ill people are not "cured" according to the usual meaning of the word, and (2) because of this, the aim of treatment in mental hospitals today should be to promote sufficient recovery in the patient so that he may be returned to his family and community as quickly as possible.

In view of these assumptions, it was decided to use as the criteria of effectiveness the following factors: (1) average length of stay in hospital per admission, (2) per cent of readmissions, (3) average length of stay out of hospital for readmitted patients, and (4) the per cent of patients released to the community within specified time periods.

The patients were studied for a three-year period following first admission in terms of these criteria.

## Results of the Study

*Average Length of Stay in Hospital.*—Table 3 shows the average length of stay per admission in the two types of hospitals according to the several diagnostic categories. Figure 1 illustrates graphically the difference in length of stay when all diagnostic groups are combined.

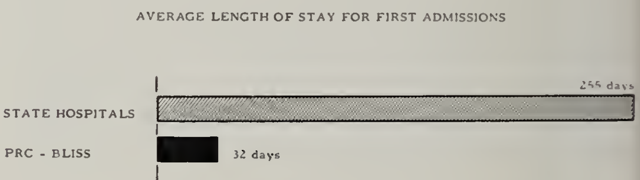


**Fig. 1. Average length of stay for first admissions.**

It is to be emphasized that the figures in table 3 include only those patients who, having achieved maximum psychiatric benefit, were returned to their homes and communities, or to some other facility for service other than psychiatric care or treatment.

Although it is true that, because of the disproportionate numbers of diagnostic cases in the two study groups, the figures in table 3 must be viewed with some question, it is to be noted that in no diagnostic category does the average length

TABLE 3

AVERAGE LENGTH OF STAY BY DAYS IN THE STATE HOSPITAL SYSTEM AS COMPARED TO THE INTENSIVE TREATMENT CENTERS

| *Diagnosis* | *PRC and Bliss* | *State Hospitals* | *Difference* |
|---|---|---|---|
| Total Group | 32 | 255 | 237 |
| Acute Brain Syndrome | 16 | 99* | |
| Chronic Brain Syndrome | 43 | 374 | 331 |
| Mental Deficiency | 15 | 432 | 417 |
| Affective Reactions | 47 | 321 | 274 |
| Schizophrenic Reactions | 56 | 261 | 205 |
| Personality Disorders | 27 | 132 | 105 |
| Psychoneuroses | 26 | 108 | 82 |
| Alcoholism | 5 | | |
| Involutional Psychotic Reactions | 35 | 281 | 246 |
| Unknown | 36 | 86 | 50 |

* Length of stay for but a single patient who had but one admission.

of stay for patients in the intensive treatment centers even come close to that for the patients in the state hospital system.

The largest single diagnostic group for the state hospitals was the 82 patients with chronic brain syndrome who had an average length of stay of 374 days. This was in contrast to the 25 patients with chronic brain syndrome in the intensive treatment center group who had an average length of stay of only 43 days.

The largest single diagnostic group for the intensive treatment centers was the 56 schizophrenic patients who had an average length of stay of only 24 days as compared to the 58 patients in the state hospital group who had an average length of stay of 261 days.

The longest average length of stay for the state hospital patients was for the mental defectives at 432 days as contrasted to 15 days for the mental defectives in the intensive treatment centers. On the other hand, other than the "Unknown" group and the one patient with acute brain syndrome, the group of state hospital patients who had the shortest average length of stay was the group of 31 psychoneurotic patients whose average length of stay was 108 days. This is in contrast to the 16 psychoneurotic patients in the intensive treatment centers whose average length of stay was but 26 days.

*Readmissions.*—Table 4 shows how the two types of mental hospitals compared in terms of readmission of those patients who had been returned to their communities.

It is to be noted, in table 4, that the two types of hospitals were somewhat similar in terms of the per cent of patients who returned to the hospitals as readmission cases within the three-year period following first admission. As shown in figure 2, 19 per cent of the patients discharged from the intensive treatment centers returned to the hospital within the three-year period, whereas 24 per cent of those patients released from the state hospitals were returned within the same period.

*Average Length of Stay Out of Hospital for Readmitted Patients.*—It is one thing, of course,

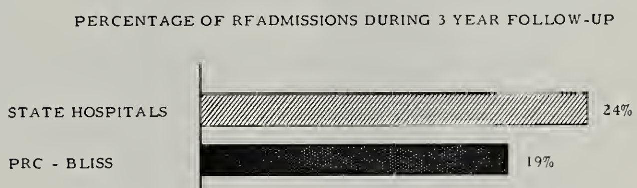


Fig. 2. Percentage of readmissions during three-year follow-up.

TABLE 4

NUMBER AND PER CENT OF ADMISSIONS OF THOSE PATIENTS RETURNED TO THEIR COMMUNITIES FROM THE STATE SYSTEM AND FROM THE SHORT-TERM CENTERS

| | *Number of Patients* | | *Per Cent* | | *Cumulative Per Cent* | |
|---|---|---|---|---|---|---|
| *Number of Admissions* | PRC BLISS | STATE HOSPITALS | PRC BLISS | STATE HOSPITALS | PRC BLISS | STATE HOSPITALS |
| Total Patients | 144 | 268 | | | | |
| 1 | 117 | 203 | 81 | 76 | 81 | 76 |
| 2 | 18 | 40 | 13 | 15 | 94 | 91 |
| 3 | 4 | 10 | 3 | 4 | 97 | 95 |
| 4 | 2 | 11 | 1 | 4 | 98 | 99 |
| 5 or more | 3 | 4 | 2 | 1 | 100 | 100 |
| Total Admissions | 194 | 379 | | | | |

to state that the short-term intensive psychiatric treatment centers are more effective in quickly returning patients to their communities. But the question of how long they remain in their communities before they are readmitted to the hospital is an important one. The argument may be raised that it does little good to return patients quickly to their homes and communities if they cannot be helped to remain there.

The 19 per cent of the patients discharged from the intensive treatment centers who had multiple admissions had an average length of stay in their communities between admissions of 245 days, or more than eight months (fig. 3). In contrast, the 24 per cent of the patients discharged from the state hospitals who had multiple admissions had an average length of stay in their communities between admissions of but 171 days, or approximately five and one-half months. In short, even among the patients who are readmitted within a three-year period, those who have been treated in the intensive treatment centers remain home for an average of two and one half months (or 43 per cent) longer than those hospitalized in the state mental hospitals.

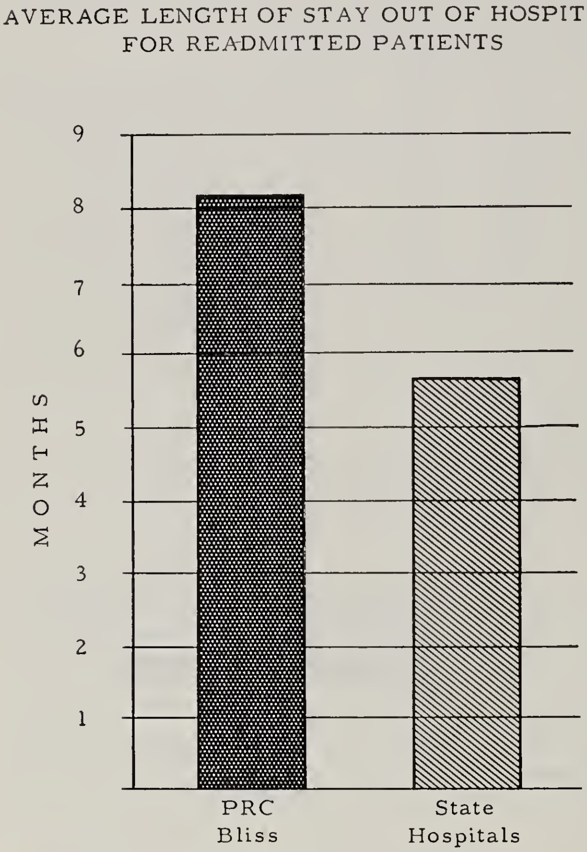

AVERAGE LENGTH OF STAY OUT OF HOSPITAL FOR READMITTED PATIENTS

**Fig. 3. Average length of stay out of hospital for readmitted patients.**

**Per Cent of Patients Released to Community Within Specified Time Periods**

Psychiatric authorities are pretty well in agreement that the longer a patient spends in the hospital, the less are his chances for recovery; and the longer he spends out of the hospital following discharge, the less are his chances of having to be readmitted. Table 5 shows the length of time prior to discharge for those patients in the two groups who did not have a readmission during the three-year follow-up period. In this particular analysis, only those patients who were not readmitted during the three-year period were included since, because of the fact of their not having had to be readmitted, they can be assumed to be the more successful cases.

TABLE 5

CUMULATIVE PER CENT OF PATIENTS WITH ONE ADMISSION ONLY DISCHARGED TO THEIR COMMUNITIES WITHIN SPECIFIED TIME PERIODS

| *Time Periods* | *PRC Bliss* | *Expectancy for State Hospitals* | *Actual for State Hospitals* |
|---|---|---|---|
| N | 117 | | 203 |
| 15 days | 43 | 35 | 5 |
| 1 month | 60 | 49 | 19 |
| 2 months | 82 | 67 | 37 |
| 3 months | 90 | 74 | 45 |
| 6 months | 99 | 81 | 60 |
| 1 year | 100 | 82 | 68 |

As stated previously, those patients admitted to the short-term intensive treatment centers who were transferred to the state hospital system because of anticipated long-term care were excluded from the study. It was impossible to exclude a comparable group from the state hospital sample, since the state hospitals do not differentiate between the short-term and long-term patients. To compensate for this difference in the two samples, a correction factor was introduced. Since 18 per cent of the original sample of intensive treatment center patients were excluded because of anticipated long-term care, it was felt justified to exclude an equal percentage of the state hospital patients on the assumption that they, too, would include an approximately equal per cent of long-term care patients. In table 5, then, the column headed "Expectancy for State Hospitals" shows the per cent of state hospital patients one might expect to have been discharged had the state hospitals been as effective as the intensive treatment centers for a group of patients comparable to those in the intensive treatment group.

Comparison of the cumulative per cent columns in table 5 brings out some rather striking differences. For example, with 60 per cent of the intensive treatment center group being discharged within the first month, 49 per cent of the state hospital group also should have been discharged within the same time period if the two types of hospitals were of equal effectiveness. Actually, however, only 19 per cent were discharged from the state system during this time period. Similarly, with 90 per cent of the intensive treatment group having been discharged within three months, 74 per cent of the state hospital patients should have been discharged within this time period. However, only 45 per cent were so discharged.

The data presented in table 5, however, refer only to the more successfully treated patients—more successfully treated in terms of the fact that during a three-year period following first admission they were not readmitted to the hospital. Such data should not be misinterpreted to mean that these percentages indicate what the chances are that an individual may be returned to his community from the two types of hospitals.

TABLE 6

CHANCES IN 100 OF BEING RETURNED TO THE COMMUNITY WITHIN SPECIFIED TIME PERIODS AND NOT RETURNING TO THE HOSPITAL FOR AT LEAST THREE YEARS

| *Time Periods* | *Total Group* | | *Chronic Brain Syndrome* | | *Schizophrenia* | |
|---|---|---|---|---|---|---|
| | PRC BLISS | STATE HOSPITALS | PRC BLISS | STATE HOSPITALS | PRC BLISS | STATE HOSPITALS |
| 1 month | 48 | 16 | 56 | 16 | 28 | 5 |
| 3 months | 72 | 36 | 76 | 34 | 71 | 24 |
| 6 months | 80 | 48 | 84 | 44 | 85* | 33 |
| 1 year | 81* | 55* | 88* | 50* | | 40* |

* The chances do not accumulate to 100 because the table includes only first year discharges and because it does not include those patients who were readmitted during the three-year follow-up period.

In order to calculate the "chances" or "odds" of being returned to the community within specified time periods and not having to return to the hospital within at least three years, the calculation must be made on the basis of the total number of patients. Table 6 shows such chances in 100 for the two types of hospitals. These chances or odds are shown in table 6 for the total group of patients as well as for the two largest diagnostic categories, i.e., those patients with chronic brain syndrome and the schizophrenics.

In interpreting table 6, it is possible to take any one of the given time periods, and by following laterally across the table, determine the chances in 100 of a newly admitted patient being discharged to the community and remaining there for at least three years from each of the two groups of hospitals under study. This is true for the total group as well as for the two selected diagnostic categories. For example, for the total group, the chances of being discharged within three months from the intensive treatment centers are 72 in 100, whereas they are but 36 in 100 from the state hospitals. For the chronic brain syndrome patients it is 76 in 100 for the intensive treatment centers, and 34 in 100 for the state hospital patients; and for the schizophrenics, it is 71 in 100 and 24 in 100 respectively.

## Summary

The results of the study can be summarized briefly. Those patients admitted to the short-term intensive treatment centers, regardless of age or diagnosis, had a significantly shorter average length of stay in hospital than those admitted to the state hospital system. Despite the fact that the readmission rates did not disclose any startling differences between the two types of hospitals, the fact was that those readmitted patients discharged from the intensive treatment centers were able to remain outside the hospital for significantly longer periods of time than those who had been treated in the state hospitals. Finally, any given patient had a much greater chance of being returned to his community within any specified time period from the intensive treatment centers than from the state hospitals.

Thus, it would appear that, according to the previously stated criteria for effectiveness, the short-term intensive treatment centers are much more effective in quickly returning patients to their communities, in keeping them out of the hospital for much longer periods of time, and giving them a much better chance of being returned to their communities and remaining there.

## Discussion

It is interesting to speculate on the possible reasons for these differences.

It still could be argued, of course, that, despite the precautions taken in conducting the study, the differences found between the two types of hospitals could be the result of the state hospitals accepting different and more serious kinds of mental patients. In Missouri this is unlikely. Because of geographical location, all but one of the five state hospitals, located as they are in non-metropolitan areas where acute psychiatric facilities are, for the most part, lacking, must serve as the only admitting hospitals for all psychiatric disturbances of the area, just as the Psychiatric Receiving Center in Kansas City and the Malcolm Bliss Mental Health Center in St. Louis must serve as the admitting centers for the metropolitan areas. It is unlikely, therefore, that the types of first admission cases would differ greatly from one another. Comparison of patients by diagnostic breakdown tends to corroborate this.

The differences in terms of the criteria of effectiveness found between the two types of hospitals are so great, and other explanations are so obvious, that it is important at this point to discuss these other possible explanations.

First, of course, is the tremendous difference in the personnel-patient ratio between the two types of hospitals. It is only logical that a patient will receive better care in an intensive treatment center where there is a vastly higher number of psychiatric personnel per unit of patient population than is possible in the notoriously overcrowded and understaffed state hospital. For example, in the Psychiatric Receiving Center-Malcolm Bliss complex, there are 32 psychiatrists and 51 nurses, with a ratio of one psychiatrist for eight patients and one nurse for every five patients. In the state hospital system, on the other hand, there are only 47 psychiatrists and 122 nurses, with a ratio of one psychiatrist for each 220 patients and one nurse for every 90 patients. It is not difficult to understand how a physician can be more effective in his treatment of psychiatric patients when he is responsible for the mental health of only eight patients than when he is responsible for 220 patients.

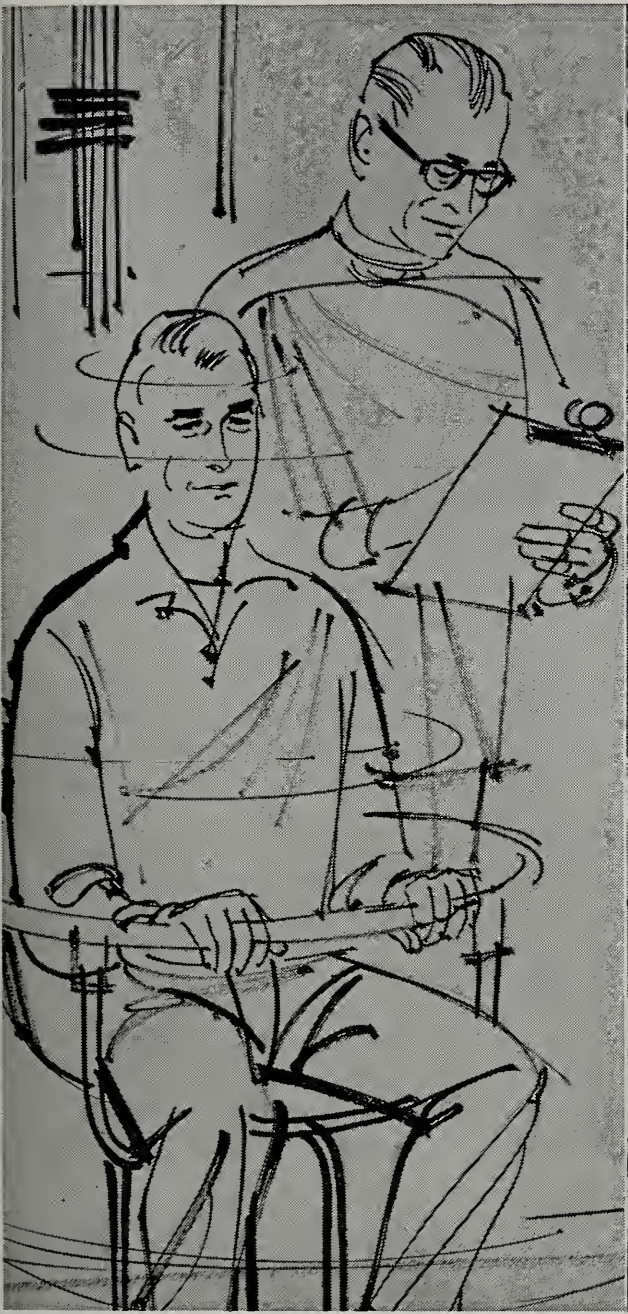
One might wish to assist the state hospital psychiatrists with their overwhelming task by recruiting sufficient psychiatric personnel to bring the ratio of physician to patient in the state hospitals into line with the intensive treatment centers. To do this, however, would require the addition of more than 1,000 psychiatrists to the Missouri state hospital system. That this would be an impossible task can readily be understood from the fact that there are now in Missouri only 195 psychiatrists; and in the whole of the United States, there are but 13,000.

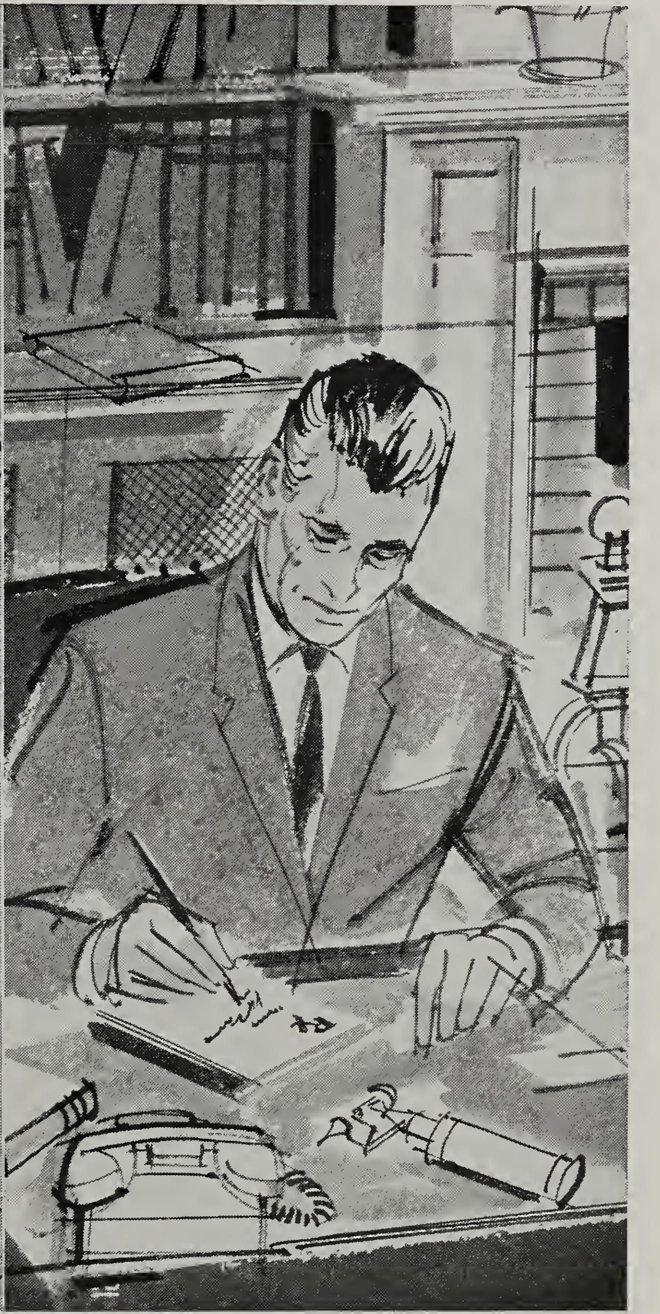
The attitudes of the staff members also undoubtedly have an important influence on the recovery rate of the patients. In the state hospitals, a considerable period of time usually is devoted to helping the patient to become familiar with the routine of his "new home." In contrast, in the intensive treatment centers, the entire staff is oriented toward the task of returning the new patient to his family and community as speedily as possible. These attitudes, of course, rub off, so to speak, onto the patient and he incorporates them quickly so that they become his own attitudes. In the state hospital setting, it is quite easy for the patient to become institutionalized, whereas in the intensive treatment center, the entire atmosphere is one of rapid recovery and quick return home. The patient is not allowed to develop the idea that he has found a new home; rather, his thoughts and attitudes are directed toward the desirability of helping himself to return to his own home as quickly as possible.

And while these attitudes are developing in the patient, similar kinds of attitudes are developing among the members of his family, friends and others in his community. When a patient enters a state hospital, he is missed as though he were lost to his family and friends; he is not expected to return. In contrast, when a patient enters an intensive treatment center, his family, friends and employer are given to understand that he will return to them quickly.

Further, in the state hospital, the new patient is forced to associate almost every waking hour with patients who have been there for five, ten, or even 20 years, and he would be almost certain to come to think of himself as a candidate for similarly long-term care. The "old timers" in the intensive treatment centers are those who have been there for only 50 or 60 days and are looking forward to returning to their own homes in the immediate future. It would be inconceivable that such attitudes on the part of the pa-

*(Continued on page 874)*





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# Thermonuclear Survival

## *Types of Shelters Useful for Families*

There are several types of hydrogen bomb shelters which can be constructed at a reasonable cost on the property of the average home owner. This article describes the basic construction and requirements of such shelters. Other articles in this series describe the necessary ventilating and sanitary systems.

A key consideration is the need for expert, professional engineering or architectural advice in planning a shelter. There are many pitfalls for an amateur engaged in such a venture. Expert professional help can be obtained locally. If desired, the names of competent engineers and architects can be obtained from the Missouri Society of Professional Engineers, P.O. Box 365, Jefferson City, or Missouri Association of Registered Architects, 210 Monroe St., Jefferson City.

**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine,* and are published with permission of that journal.**

**Dr. Garb is secretary of Medical Education for national Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.**

**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

### Steel Shelters

A corrugated steel pipe covered with three to five feet of earth offers a safe inexpensive shelter (fig. 1). A complete shelter of this type should cost considerably less than a garage. Corrugated steel is at least five times stronger than an equivalent weight of plain steel. It usually comes galvanized, so that it is protected from rust.

Several shapes are available, and suitable for shelters. The round pipe offers the greatest volume per dollar. The pipe arch is slightly more expensive per cubic foot but is more convenient for situations where a deep excavation is impossible. Pipe arch is a shape with a relatively flattened bottom and an arched dome. It encloses more space for a given height than does a circle. The half oval or semicircle may be a good choice for ground which is dry.

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## MENTAL HOSPITALS

*(Continued from page 872)*

tients already present in the hospital do not have a positive or negative influence on the motivation of the new patient for rapid recovery.

In short, the differences in the entire atmosphere of the two types of hospitals probably account in large measure for the tremendous differences in their effectiveness—more so than any possible differences in the types of patients. It is only logical that more rapid recovery correlates highly with such factors as doctor-patient ratio, nurse-patient ratio, staff attitudes, patient attitudes, the attitudes of the patient's family, friends and community, emotional ties with family and friends, desirable attitudinal influences of patients on each other—in short, the milieu of the total therapeutic environment.

The state hospitals will, of course, best serve those patients whose illness does not respond to such intensive treatment. Short staffed as they are, however, even the job of rehabilitating the long-term mentally ill could be done more effectively if they were not also responsible for a heavy load of acutely admitted patients in need of intensive treatment. It would appear that a sharing of their burden with several short-term intensive treatment centers may well be an answer to the problem facing Missouri's state hospitals.

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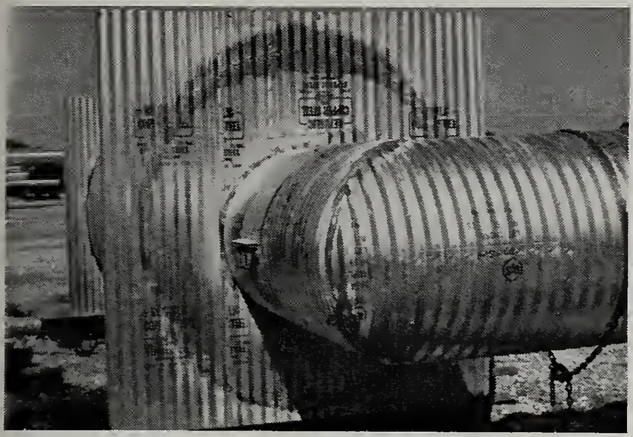


**Fig. 1.** Corrugated steel pipe offers a safe inexpensive shelter.

These items are manufactured in a wide variety of diameters and gauges, but for practical purposes only a few are suitable shelter material. The largest diameter pipes, which would be most comfortable, require a deep excavation which is not practical in most soils without considerable expense. Furthermore, the resistance to blast decreases as the diameter increases. As a reasonable compromise, several different sizes have been selected which should provide a sufficient variety for most situations. Table 1 and table 2 indicate the size of pipe which would make a suitable shelter for an average family of two adults and two teenage children, or two adults and three small children.

### TABLE 1

### FEATURE OF GALVANIZED CORRUGATED STEEL PIPE NECESSARY TO PROVIDE SUITABLE SHELTER FOR AN AVERAGE FAMILY

| | | 12 Gauge | |
|---|---|---|---|
| *Diameter (Inches)* | *Necessary Length (Feet)* | *Dollar Cost* (Approxmate)* | *Weight (Pounds)* |
| 48 | 26 | 338 | 1,780 |
| 54 | 20 | 313 | 1,570 |
| 60 | 16 | 275 | 1,394 |
| 72 | 12 | 246 | 1,236 |

Any of these pipes or pipe arches has a large margin of extra strength and will resist not only a weight of many feet of earth, but also an added blast overpressure from a nearby explosion.

If there is little or no warning before attack, these shelters can protect against fallout only.

### TABLE 2

### FEATURES OF GALVANIZED CORRUGATED STEEL PIPE ARCH NECESSARY TO PROVIDE SUITABLE SHELTER FOR AN AVERAGE FAMILY

| | | | 12 Gauge | |
|---|---|---|---|---|
| *Span (Inches)* | *Arch (Inches)* | *Necessary Length (Feet)* | *Dollar Cost* (Approximate)* | *Weight (Pounds)* |
| 72 | 44 | 18 | 326 | 1,566 |

* Main pipe only. End closures and entrances not included.

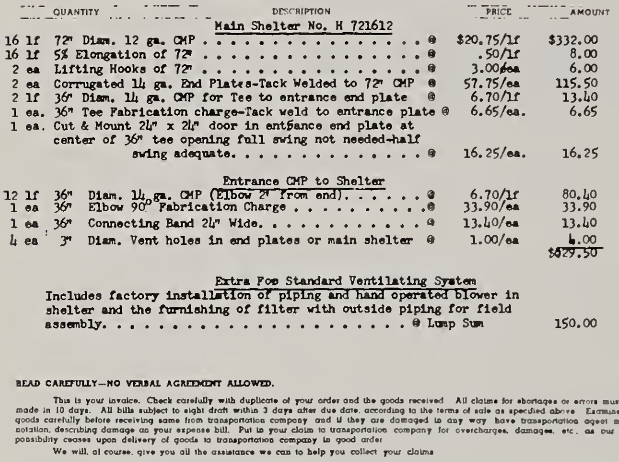
The ends of each pipe or pipe arch should be sealed with galvanized corrugated sheet steel at least 10 gauge thick, with a small hinged door about two feet wide and two feet high cut into one end to act as an entrance. The end closures should be ordered from the manufacturer with the order for the pipe. They can be attached with devices furnished by the steel company, with a series of large angle irons, or by welding. Right of way marker posts welded in place can be used to strengthen the end-closure.

The decisions as to whether round pipe or pipe arch is best and which diameter to use have to be based on the amount of land available, the nature of the soil and the accessibility of the site to motorized excavating machines. It is almost impossible to dig a suitable hole by hand. In most cases, the hole can be dug and the shelter placed and then covered by earth by a machine for a total cost of about $100. It would be best to request a local excavating contractor to take the job and to ask him whether or not his machines can reach the site and dig holes of the proper depth, width and length. A local engineer also should be consulted. His fee usually will be quite reasonable.

It is always possible to put a pipe or a pipe arch in a shallow excavation, or even on the surface of the ground, and cover it with earth. In some areas with high water tables, this will be necessary.

The corrugated pipes and pipe arches may be purchased from local dealers or through any of the following manufacturers: Armco Drainage and Metal Products, Inc., Middletown, Ohio; Wheeling Corrugating Co., Wheeling, West Virginia; United States Steel Co., 525 William Penn Place, Pittsburgh 30, Pennsylvania; and Republic Steel, 2318 13th Street, Canton 5, Ohio.

In the State of Missouri, corrugated steel pipe shelters may also be ordered from M & M Highway Materials Company, Columbia, Missouri. This firm has had some experience in the fabrication of these shelters and will make them to order to fit any individual needs at a reasonable price (fig. 2). There are other companies in Missouri also equipped to make these.



| QUANTITY | DESCRIPTION | PRICE | AMOUNT |
|---|---|---|---|
| | Main Shelter No. H 721612 | | |
| 16 lf | 72" Diam. 12 ga. CMP . . . . . . . . . . . . . . . . . . @ | $20.75/lf | $332.00 |
| 16 lf | 5% Elongation of 72" . . . . . . . . . . . . . . . . . . @ | .50/lf | 8.00 |
| 2 ea | Lifting Hooks of 72" . . . . . . . . . . . . . . . . . . @ | 3.00/ea | 6.00 |
| 2 ea | Corrugated 14 ga. End Plates-Tack Welded to 72" CMP @ | 57.75/ea | 115.50 |
| 2 lf | 36" Diam. 14 ga. CMP for Tee to entrance end plate @ | 6.70/lf | 13.40 |
| 1 ea. | 36" Tee Fabrication charge-Tack weld to entrance plate @ | 6.65/ea. | 6.65 |
| 1 ea. | Cut & Mount 24" x 24" door in entrance end plate at center of 36" tee opening full swing not needed-half swing adequate. . . . . . . . . . . . . . . @ | 16.25/ea. | 16.25 |
| | Entrance CMP to Shelter | | |
| 12 lf | 36" Diam. 14 ga. CMP (Elbow 2' from end). . . . . . . @ | 6.70/lf | 80.40 |
| 1 ea | 36" Elbow 90° Fabrication Charge . . . . . . . . . . .@ | 33.90/ea | 33.90 |
| 1 ea | 36" Connecting Band 24" Wide. . . . . . . . . . . . . @ | 13.40/ea | 13.40 |
| 4 ea | 3" Diam. Vent holes in end plates or main shelter @ | 1.00/ea | 4.00 |
| | | | $629.50 |
| | Extra For Standard Ventilating System | | |
| | Includes factory installation of piping and hand operated blower in shelter and the furnishing of filter with outside piping for field assembly. . . . . . . . . . . . . . . . . . . . . @ Lump Sum | | 150.00 |

READ CAREFULLY—NO VERBAL AGREEMENT ALLOWED.

This is your invoice. Check carefully with duplicate of your order and the goods received. All claims for shortages or errors must be made in 10 days. All bills subject to sight draft within 3 days after due date, according to the terms of sale as specified above. Examine all goods carefully before receiving same from transportation company and if they are damaged in any way have transportation agent make notation, describing damage on your expense bill. Put in your claim to transportation company for overcharges, damages, etc., as our responsibility ceases upon delivery of goods to transportation company in good order.

We will, of course, give you all the assistance we can to help you collect your claims.

Fig. 2. Typical order blank.

It will prove easiest to do all construction work on the pipe when it is above ground. Corrugated pipe or pipe arch should never rest directly on rock or concrete. There must be at least an eight inch layer of earth between the pipe and any ledge of rock. This helps distribute a load (such as a blast) and keeps the pipe from breaking.

When the pipe or pipe arch is placed in the excavation and covered, it is important to tamp in the earth at the sides solidly. It will be best to have the loose earth filled in up to about three quarters of the height of the pipe and tamped in, and then to have the remaining fill added. Water is considered unsuitable for packing the earth around corrugated pipe. The manufacturers also recommend another method of assuring maximum strength from their pipes. Steel struts or wood jacks are used to deform slightly the round pipe into an oval with the vertical axis the longer. After the pipe is in position and the earth is filled in, the struts or jacks are released allowing the pipe to spring back and to exert pressure against the earth at the sides. This increases greatly the resistance of the structure to pressures from above.

The pipe can be ordered already deformed at an additional cost of only $1.00 to $2.00 per linear foot.

*Entrance.*—The entrance to the shelter should be a passageway with at least one angled turn. It should be at least eight and preferably 10 to 12 feet long and should slope down to the shelter.

If possible, it should be made of 16 gauge corrugated galvanized steel pipe, 36 inches in diameter. It can be ordered from the steel company already fabricated to fit exactly the main body of the shelter. In some cases, it will be possible to make such an entrance a direct extension of a basement or garage (fig. 3). This is a distinct advantage. Another type of entrance is shown in figure 4.

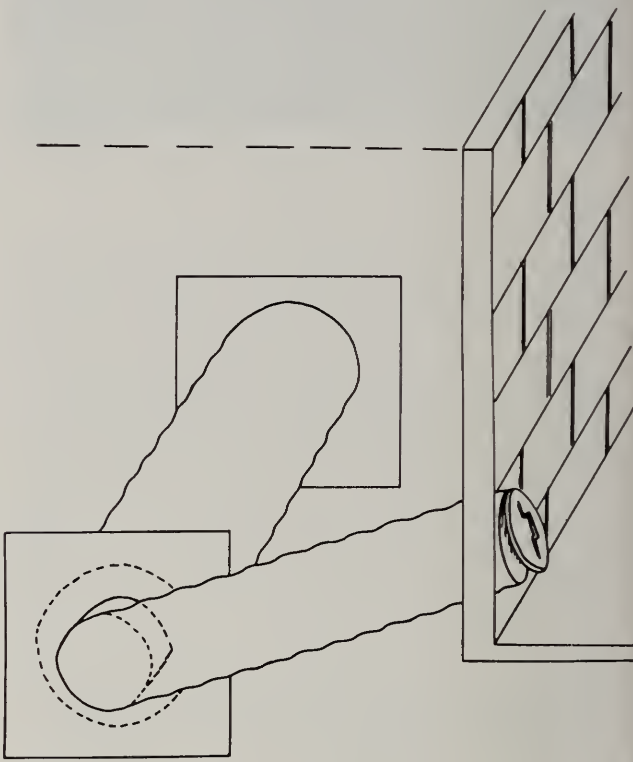


Fig. 3. Entrance may be an extension of a basement or garage.

Also, there should be a hinged cover which can be opened or closed from within the shaft. The cover can be made of sheet steel or corrugated steel. It should have a lip extending around the pipe. It, too, can be ordered from the pipe manufacturer.

An emergency exit can be added if desired.

*Protection Against Water Seepage.*—In some cases, radioactive rain may fall soon after an explosion and, in other cases, bombs may explode in bodies of water. Unless the shelter is protected against water, the radioactive rain might seep through the sand and harm the occupants of the shelter. Fortunately, it is a rather simple matter to protect the shelter against such rain. A wide sheet of polyethylene covering the shelter and anchored securely by sandbags or sand will give good protection. Because this material is inex-

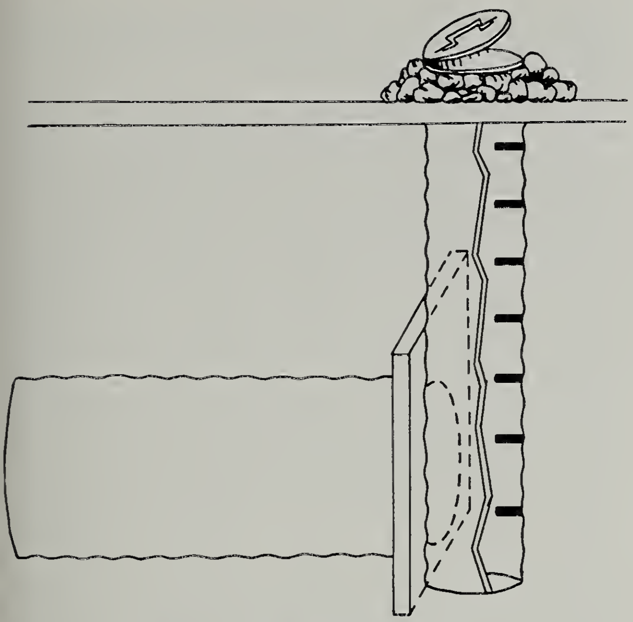


Fig. 4. Another type of entrance.

pensive, it is practical and worthwhile to use several layers, each separated by two or three inches of sand.

The polyethylene should be placed near the surface, not near the steel. Thus, any contaminated material is kept as far from the shelter as possible. If possible, there should be three feet of earth between the plastic and the steel. Enough topsoil can be placed over the plastic to allow grass to grow.

Polyethylene of sufficient thickness in widths up to 20 feet can be purchased from the Montgomery Ward Company at a reasonable price. At least 4-mil or preferably 6-mil polyethylene should be used.

### Should the Shelter Be Waterproof?

Whereas it is advisable to keep water away from the shelter, it is seldom advisable to have the shelter proper watertight. In a specific rare occasion, it would be helpful to have a watertight shelter. That would be in a case in which a shelter is buried so that the bottom of the shelter is approximately one to two feet lower than the water table surrounding it. In such a case, having a watertight shelter will prevent the ground water from seeping into the shelter from below and making the inhabitants uncomfortable.

On the other hand, if this situation of high water table is not present, a watertight steel shelter offers no particular advantage, and has at least one disadvantage. If radioactive materials, carried by run-off water were to penetrate through the earth and the polyethylene to the outside of the steel shelter, it would make little difference if it dripped through into the shelter proper. The steel itself is too thin to afford any appreciable protection. If the shelter is made watertight, and if there are ways in which ground water can get to the shelter, the owner of the shelter will have no way of knowing it. On the other hand, if the shelter is not watertight, and there are ways for ground waters to penetrate it, then after a heavy rain before a thermonuclear attack, the owner of the shelter will see water dripping inside and will know that some sort of corrective action must be taken to keep the water away from the shelter. That corrective action might be the installation of more polyethylene, it might be a change of the grading of the earth above, or anything else. Thus, except in the one situation noted, a waterproof shelter does not afford any advantage and presents a certain disadvantage.

The discussion should not, however, produce any undue alarm about the possibility of radioactive materials penetrating to a shelter through the earth cover. In most situations this would not be a serious problem at all, since studies have shown that the radioactive particles which are most dangerous are quite large and move through packed earth slowly. Even if there were a heavy rain immediately following a thermonuclear attack, the likelihood is that most of the radioactive particles would only move about an inch through the upper layers of the soil. With well-packed soil, there is practically no danger of radioactive materials getting close to the shelter for the early days after an attack, when the danger is greatest. The only situation in which an appreciable danger would be present from radioactive water seepage would be one in which there are cracks, fissures or channels in the earth above the shelter, which would allow water to pour through rather quickly, and in most cases, these things can be prevented by packing the earth.

### Concrete Shelters

A poured concrete bomb shelter is not a suitable project for the home handyman. It must be built by a reliable contractor, preferably under the supervision of an independent engineer or architect.

In general, the shelter should be designed and built in conformity with the building code requirements for reinforced concrete and the designs of the Civil Defense Administration. The exact design drawings are available at a cost of only 5 cents from the Superintendent of Documents, Washington 25, D. C.[1]

Changes can be made, of course, in accord with local needs provided there is no weakening of the structure.

The concrete must be mixed, poured, vibrated and cured properly. It must never be allowed to freeze before it is cured. Steel reinforcement using deformed steel bars must be prepared according to strict specifications. In the roof slab, the longitudinal bars are spaced every 12 inches, whereas the horizontal bars are only four and one-half inches apart. Note that these are thick number four steel bars about one-half inch in diameter, not the reinforcing mesh which is used to reinforce driveways and which looks like a wire fence. Even if thicker concrete is used, the reinforcing bars must still be present. This includes roof, walls, floor and interior partitions. Furthermore, the reinforcing bars run in two planes to make a grid pattern. The amount of reinforcing bars needed for the concrete of the simple shelter is approximately 1,300 feet and weighs about 870 pounds. The concrete itself will weigh about 45,000 pounds. The earth cover weighs still more.

The structure will be much stronger if all walls are poured as a single unit, and since the roof slab is relatively thin and weak anyway, it also should be poured as a single unit.

There are many pitfalls in the construction of a concrete shelter which make continual supervision of the job essential. For example, after excavating the earth for the shelter, the bottom of the excavation must be leveled and thoroughly tamped before the slab is poured. Otherwise, there may be uneven settling which could crack the structure. Other details relating to the mixing, pouring and curing of the concrete can be adequately supervised only by someone experienced in concrete construction.

*Costs.*—The costs of a reinforced concrete shelter are high. It is quite misleading to calculate the cost of the raw materials and assume that the total cost will be in the same range. The major cost of concrete work is not the concrete, but the forms which must be properly built, placed, supported, and then removed. Highly skilled labor is needed, and the hourly wage is high. In the case of a concrete bomb shelter, the weight of concrete will require extra strong supports which will have to be placed in a relatively cramped space underground. This, of course, adds to the cost.

On the other hand, the picture might be quite different if there were a government shelter building program. Then, prefabricated reusable forms would be available, and shelters could be constructed on an assembly-line basis. This would bring costs way down and as a result, concrete shelters could be provided at a cost of less than $1,000 per family.

If a decision is made to have a poured concrete bomb shelter, it seems essential that an independent engineer or architect be engaged to supervise and inspect the contractor's work. To the inexperienced, concrete placement may seem like a relatively simple thing. However, there are many pitfalls in concrete work, and if there should be any defect in the concrete, the entire structure might be dangerous as well as useless.

*Problems Involved.*—There are many problems involved in concrete mixing and placement. The mix proportions may not be ideal. The sand or coarse aggregate may not be perfectly clean. Excessive water may be used. Vibration may not be done properly. Indeed, even the angle at which concrete is poured from a mixer or wheelbarrow into the forms can greatly affect its strength. The concrete manual of the U. S. Department of the Interior points out that if concrete is poured into a deep form at an angle and strikes the side of the form on the way down, separation of the components will occur.[2] This will weaken the base of the entire structure.

It would be an error to assume that a builder or contractor experienced in pouring concrete footings or concrete driveways would necessarily be capable of pouring a concrete bomb shelter properly. It is relatively simple to pour shallow layers of concrete directly onto the ground. However, a bomb shelter wall is a much more difficult and complex proposition.

The floor and walls of an underground concrete bomb shelter should be a minimum of eight inches thick. The roof slab must be not less than six inches thick. As mentioned previously, all the concrete must be strongly reinforced with steel bars. These dimensions can, of course, be increased but only at a tremendous increase in cost. Under certain circumstances, the roof, instead of being six inches of concrete covered by two and a quarter feet of earth, might be 20 inch thick concrete. When this thickness is used, the concrete is usually placed as two separate layers of 10 inches each.

## INTERIOR SHELTERS

Several government publications describe basement corner shelters, interior room shelters and other shelters which may be incorporated into existing homes.[3, 4] The plans for such shelters are frequently reproduced in newspapers and magazine articles. Although such shelters are much better than no shelter at all, they are less satisfactory than an outside underground shelter. It is difficult to support safely the required weight of earth or concrete in the average basement. If the shelter walls and ceiling are the full three feet thick, the shelter will weigh from 50,000 to 100,000 pounds. This weight probably will crack the house foundation unless the entire basement floor rests on bedrock or unless additional footings are poured, a costly and difficult task in an existing house.

Most basements are relatively shallow; therefore, it is impossible to have a three foot thick ceiling and still have much room in the shelter. In such cases, the Federal Civil Defense Administration advises that the floor above be covered with sandbags after the floor joists are strongly braced.

However, this, in effect, means taking a room away from the house and therefore, most people are not likely to build such a shelter until an attack is imminent. By then it may be too late, since it is not easy to move such enormous masses of earth. The energy and expense of building this type of shelter would usually be spent better in making an underground shelter where possible.

Nevertheless, there are those who live in urban areas and who simply have not the land for underground shelters. Although the basement or interior room shelter is not ideal, it can give enough protection to save most people's lives if properly designed, and built. It is difficult to calculate the survival chances in basement and interior shelters because so much depends on the basic structure of the house.

If the decision is made to build a basement or interior room shelter, an architect should be consulted. Without his advice, it would be easy to ruin the entire house. The basement or interior room shelter needs all the accessories required for other shelters and a supply of food, water and other items.

From time to time, government agencies issue press releases describing different kinds of interior shelters. Unfortunately, they use such general terms that some people may be confused about the relative degree of protection provided.

Before deciding on a particular shelter, one should know the amount of protection to be provided. This can be calculated readily from the half-thickness values given in the third article in this series.

Occasionally, suggestions are made that a structure be built for a dual purpose—to serve as a bomb shelter and also for other uses. Perhaps in large reinforced concrete structures this may be practical. However, for a family shelter it is not. Attempts at a dual function are likely to result in inadequate protection or may result in greater expense rather than savings. Therefore, it is recommended that the shelter be designed solely as a shelter.

A basic principle behind the use of a basement shelter is that anything which is below the level of ground will not receive direct radiation from particles on the ground. Thus a simple foxhole will give a great deal of protection. The radiation which penetrates to a basement or to the bottom of a foxhole is mainly radiation which bounces back from the sky. This is sometimes known as "sky shine" and in general this is about one-tenth of the radiation level at the surface of the ground. Any structure which is built in a deep basement automatically has the protection factor afforded by the underground location, multiplied by the protection factor in the walls and ceiling of the shelter proper. These protection factors multiply, provided there are no weak links. Thus the basic OCDM family fallout shelter made of eight inch thick concrete blocks has a basic protection factor of ten; however, because it is built in a deep basement, the total protection factor becomes 10 times 10 or 100. It must be noted, however, that the protection factor afforded by a basement applies only to those basements which are well below ground level and do not have a large number of windows. The so-called walkout basements do not afford this degree of protection nor do basements which have a large number of windows in a playroom. Even if a shelter were built in a far corner of a basement of that type, the protection factor would be considerably less than in the case of a similar shelter built in a basement which is underground on all four sides. Anyone who is in doubt about the suitability of his basement for construction of a fallout shelter should consult a local Civil Defense official and get authoritative advice. In the event that a basement does not give the needed protection factor of 10, any fallout shelter constructed in such a basement will have to be considerably thicker than that recommended by the OCDM.

There are other ways of handling the fallout shelter problem in a basement which lend themselves to situations in which cost is a serious problem. A reasonably satisfactory fallout shelter can be constructed in a basement, substituting crushed rock for concrete blocks. Concrete block generally costs between $20 and $25 per ton whereas washed, crushed rock costs between $2 and $3 per ton. Crushed rock has the same amounts of voids as sand and its half thickness is 3.3 inches compared to 2.2 inches for concrete. Crushed rock may be used in the building of a basement shelter in the following manner:

1. Mark off an area in which the shelter is to be built in a corner of the basement.
2. Brace each of the floor joists by placing a stud underneath it at the seven foot mark and nailing securely. Thus the total unsupported span of the joist is reduced to seven feet and this increases the weight carrying capacity of the joist approximately four times.
3. Nail a strip of expanded metal lath to the underside of a row of joists. These strips range from 24 to 30 inches wide and should be nailed securely using J type nails which are obtainable from most lumber dealers. If desired, a strip of wood can be nailed underneath to help provide further support.
4. Crushed rock is then shoveled into the space between the joists and is held up by the strip of metal lath.
5. Another strip of metal lath is nailed in place and more crushed rock put in.
6. This procedure is repeated until the entire space between the joists overhead has been packed with crushed rock.
7. The metal lath is tapped gently from below to distribute the crushed rock more evenly.
8. Sidewalls are made, using wood, corrugated steel or any other strong material which may be available, as permanent forms. They should be at least 12 and preferably 18 to 36 inches apart. The spaces between the two walls are then filled with crushed rock.

In this type of construction the combination of crushed rock and metal lath is used because it prevents moisture from collecting and condensing around the joists. If water should remain around those joists they would eventually rot and the house would collapse; however, the voids in crushed rock are relatively large and metal lath is completely porous. Therefore, any water vapor which might condense in the area between the joists would drain down. The likelihood, however, is that there would be no appreciable condensation because of good ventilation throughout that area. If one wishes to do so, this procedure may be used in combination with the OCDM family fallout shelter plans and a shelter with a protection factor of 1,000 or better can be built.

Shelters suitable for larger groups than a single family are discussed in other papers in this series.

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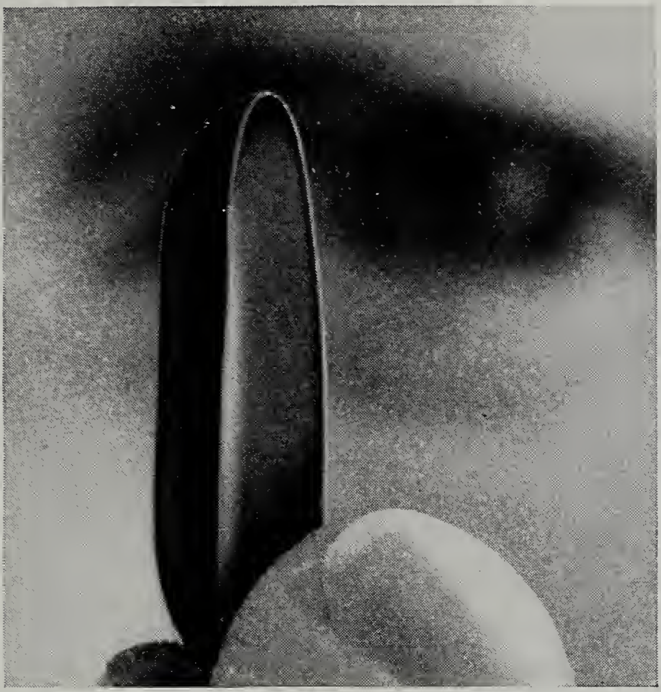
2. Concrete Manual, 6th Ed., U. S. Department of the Interior, Washington, D. C., U. S. Government Printing Office, 1956, p. 261.
3. The Family Fallout Shelter, MP-15, Official Civil Defense Manual, Washington, D. C., U. S. Government Printing Office, 1959.
4. Shelter from Radioactive Fallout, TB-5-2 Federal Civil Defense Administration, Washington, D. C., U. S. Government Printing Office, 1956.

Income and days spent in bed from illness are in inverse ratio according to a recent survey. The category ran from 8.5 days of bed disability in families with an income of less than $2,000 to 5.2 days of illness in families with incomes of $7,000 and over.



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Donald M. Dowell, M.D.

# President’s Message

The first round, with regard to the King-Anderson Bill, has in my opinion, been won by the medical profession, of this country. There has been a great deal of shouting, on both sides, but it would take a great deal of imagination, on the part of the medical profession, to believe that this is the final round, so far as the government is concerned.

I frankly believe that it will be a great issue, in the coming election this fall. The same methods will be advocated, as were used this year.

No physician is opposed to improving the medical care of the elderly—or any other group, for that matter. The physician’s principles and his livelihood depend on giving the best medical care that it is within his power to give. By incorporating medical care with the social security system, so far as the care of the elderly is concerned, is definitely not going to improve medical care. It might, however, deteriorate the type of care and, in all probability, improve the financial status of the physician.

The medical profession, of this country, is not interested in improving the financial condition, but are more inclined to wish for better medical care. We do not feel that we have reached perfection in all care, but constantly improving care could be jeopardized by legislation that would hinder it.

It is for this reason that I wish to implore the medical profession to neglect party lines, on this November election, and vote for the party or the individual who feels as we feel, that private enterprise practice of medicine can never be surpassed by any kind of governmental subsidized care.

D. M. Dowell, M.D.

# EDITORIAL

## FREQUENCY OF FATAL ACCIDENTS

Public accidents, exclusive of those involving motor vehicle accidents, account for about one fifth of all fatal injuries suffered annually in the United States. In 1959, approximately 18,000 lives were lost in such public accidents. Four out of every five victims were male.

Accidental falls in public places killed about 4,900 people, a larger number of deaths than from any other type of fatal accident. A majority of fatal falls occurred in homes for the aged, hospitals and other resident institutions, all of which house a great many older people. One fifth of the mortality from falls was due to injuries sustained on streets and highways.

Drownings other than those in water transportation ranked a close second, with about 4,300 deaths, mainly among bathers. Children and young adults accounted for most of these fatalities. Water transportation took an additional 1,600 lives.

Following in order of decreasing numbers were accidents involving aircraft, railways, firearms and fire and burns by other means.

Thinking that a substantial proportion of deaths sustained in public accidents might be associated with sports and other recreational activities, the Metropolitan Life Insurance Company made a study of the deaths attributed to sports and recreation in 1959 among its policy holders through the ages of 10 to 64 years. The study is reported in the June issue of the *Statistical Bulletin*.

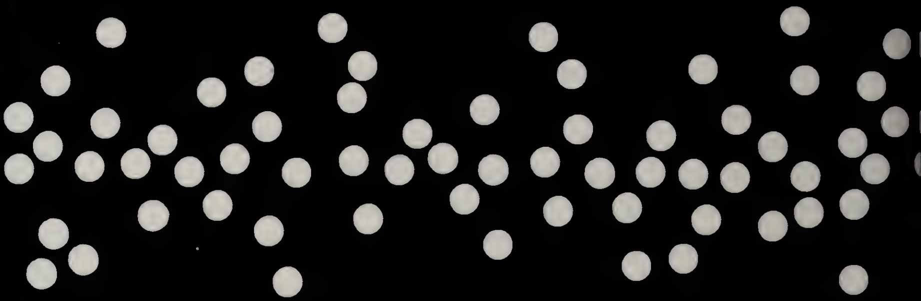
Water sports exclusive of boating accounted for more than two fifths of the 315 deaths. A large majority of the victims were swimming, wading or playing in ponds, rivers, lakes and other large bodies of water. Quite a number occurred in swimming pools. One out of every 11 deaths attributed to water sports was the result of diving from springboards, docks and other places. Skin and scuba diving and water skiing were responsible for the loss of seven lives.

Pleasure boating caused one sixth of the deaths in the study. Overloading of boats, occupants shifting positions or transferring from one boat to another and the use of small boats in rough waters accounted for a considerable proportion of the fatalities associated with pleasure boating.

Boats figured prominently in the mortality associated with such sports as fishing and hunting, as 29 of 46 deaths in fishing accidents, and 10 of 35 deaths in hunting involved boat accidents. Only a little more than half of the deaths attributed to hunting were the result of firearm accidents.

Other sports and recreational activities that added to the death toll in this study included horseback riding, baseball, basketball, football and target shooting.

The U. S. Public Service estimates that approximately 600,000 children swallow poisonous substances each year and about 500 die. Poison control centers reports show that 90 per cent of poisoning incidents occur in children less than five years of age, with 18 months to two years being the most hazardous age.



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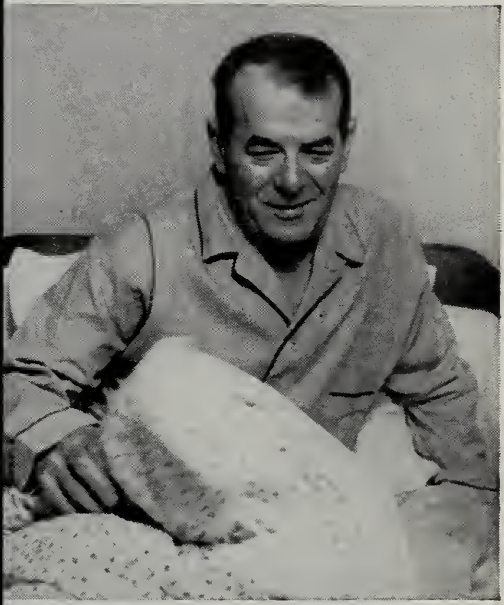

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# Ramblings of the Field Secretary

A most interesting meeting took place in Nevada at the Country Club on Thursday night, June 14. This was a joint session of the West Central Missouri Medical Society and the lawyers of the area. The Vernon County Bar Association cooperated with Charles B. Wheeler, M.D., pathologist, General Hospital, Kansas City, in presenting a program skit entitled "An Accident, an Abortion and Anxiety." This type of program seemed to be unusually well received by both doctors and lawyers. An excellent attendance undoubtedly pleased those on the program as well as those who were in charge of the occasion.

The accompanying picture includes a number of special guests who posed with Drs. Giesler and Pearse of the local medical society. They are: Jack P. Pritchard, Nevada, Judge of the 28th Judicial Circuit and President of the Missouri Association of Juvenile Court Judges; Dr. Don Giesler, Osceola, President, West Central Missouri Medical Society; Jackson Wright, Mexico, President of the Missouri Bar Association; William Bartleson, Kansas City, Executive Secretary, Jackson County Medical Society; Dr. Vernon Wilson, Columbia, Dean, University of Missouri Medical School; William McCaffree, Nevada, President of the Vernon County Bar Association; and Dr. Roy Pearse Jr., Nevada, President of the Missouri Academy of General Practice. More than 50 doctors and lawyers attended. A pleasant social hour and man-sized dinner preceded the formal program.

Some of the guests who attended the meeting.

The Marion-Ralls-Shelby County Medical Society did its share in bringing to the attention of the people in its area the fallacies of the King-Anderson Bill. At the May meeting the Society voted to levy whatever assessment was necessary to buy local radio and television time for this purpose. The AMA film "Where Is Medicine Going?" by Dr. Annis was secured and television time purchased to show it. A member of the Society introduced the film and stated that the Society unanimously endorsed the stand of the AMA in opposing the King-Anderson Bill. The local radio station was contacted and a contract signed with them to tape statements by the members of the medical society regarding their personal opinions of the King-Anderson proposal.

These statements were approximately one minute in length, and were replayed at intervals throughout the day for a period of one week, providing a so-called saturation coverage. Additional arrangements were made for newspaper coverage. There are about 25 members in this medical society. They have demonstrated concretely some effective steps doctors can take on vital issues of this nature.

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brand of sustained release capsules

*she's losing weight*

'Dexedrine' *Spansule* capsules not only control appetite all day long, but at the same time encourage normal activity. This is particularly important because overweight patients are often inactive. In such patients 'Dexedrine' overcomes lethargy, helps renew their interest in doing things—not just eating.

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PRESCRIBING INFORMATION

INDICATIONS AND DOSAGE: For the following indications, the recommended daily dosage is one or two 'Dexedrine' *Spansule* capsules, usually taken in the morning: control of appetite in weight reduction; depressive states; alcoholism. In narcolepsy, the recommended daily dosage is up to 50 mg. of 'Dexedrine' by 'Spansule' capsule on arising.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Should be used with caution in patients hypersensitive to sympathomimetic compounds; in cases of coronary or cardiovascular disease; and in the presence of severe hypertension.

CONTRAINDICATIONS: Hyperexcitability; agitated pre-psychotic states.

SUPPLIED: 5 mg., 10 mg. and 15 mg., in bottles of 30. (Each capsule contains dextro amphetamine sulfate, 5 mg., 10 mg., or 15 mg.)

*Prescribing information adopted January 1961.*

*Smith Kline & French* SK&F *Laboratories*

# Missouri Medical News

Among guest speakers at a Medical Progress Assembly to be held in Birmingham the last of September is **Carl V. Moore**, M.D., St. Louis, who will speak on "The Concept of Relative Bone Marrow Failure and Its Importance in the Understanding of Anemias."

"For 55 years of conspicuous service in Liberty, Mo., this certificate of recognition is awarded to **William H. Goodson**, M.D., by the Liberty Chamber of Commerce, Inc., July 17, 1962" was the reading on a plaque presented to Dr. Goodson at a Chamber of Commerce luncheon. Members of the Clay County Medical Society were invited to the meeting.

The Monett Hobbs-Anderson Post 91 of the American Legion recently elected and installed **R. G. Powell**, M.D., Joplin, as commander.

Recently appointed by the Board of Trustees of the A.M.A. to serve on the A.M.A. Council on Occupational Medicine is **Richard A. Sutter**, M.D., St. Louis.

Principal speaker at the cornerstone ceremonies for the Johnson County Memorial Hospital at Warrensburg was **R. Lee Cooper**, M.D., Warrensburg.

While at Camp Ripley, Minnesota, for summer field training, Lt. Col. **Rollin H. Smith**, West Plains, was presented a plaque for his long service in the National Guard. Dr. Smith will retire from the National Guard in November after 20 years of service.

A luncheon was given in Breckenridge in July for **E. A. Thompson**, M.D., now of Columbia, who practiced in Breckenridge for many years until about 10 years ago.

At a meeting in July **David R. Edwards**, M.D., Sedalia, explained the various health plans under consideration at that time to the Sedalia Kiwanis Club.

The International Cardiovascular Society has elected **C. Rollins Hanlon**, M.D., St. Louis, as president. He will hold the office for two years and will deliver a presidential address next year when the society meets in Rome, Italy.

Among lecturers at a course at the Loma Linda University School of Medicine, Los Angeles, late in October will be **Pat A. Barelli**, M.D., Kansas City, and **Daniel D. Klaff**, M.D., St. Louis.

Medical care issues were discussed by **Robert M. Myers**, M.D., Kansas City, on July 1 before the Single Adults Class of the Second Presbyterian Church, Kansas City.

At a meeting of the American College of Chest Physicians held in Chicago in June, **Alfred Goldman**, M.D., St. Louis, was elected first vice president. **Charles A. Brasher**, M.D., Mount Vernon, was reelected a district regent.

## NEW MEMBERS

**Matthew J. Doyle**, M.D., 515 E. High St., Jefferson City, has become a member of Cole County Medical Society. Dr. Doyle is a native of Ireland, received his preliminary education at Royal College, and his M.D. degree at Royal College in 1955.

**Charles E. George**, M.D., 6306 Morningside Drive, Kansas City, has become a member of Jackson County Medical Society. Dr. George is a native of Texas, received his preliminary education at the University of Texas, and his M.D. degree at the University of Texas in 1957.

**Jim Joffe**, M.D., 628 W. Garland St., Paragould, Ark., has become a member of Dunklin County Medical Society. Dr. Joffe is a native of New York, received his preliminary education at Tulane University, and his M.D. degree at Tulane University in 1944.

**Phillip E. King**, M.D., 107 W. Spring St., Excelsior Springs, has become a member of Clay County Medical Society. Dr. King is a native of Missouri, received his preliminary education at William Jewell College, and his M.D. degree at Washington University in 1961.

**Harriet B. Mantell**, M.D., 634 W. 67th Ter.,

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Anxious
Depression

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***Supplied:*** 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50. Also as MEPROTABS® – 400 mg. unmarked, coated tablets; and in sustained-release capsules as MEPROSPAN®-400 and MEPROSPAN®-200 (containing respectively 400 mg. and 200 mg. meprobamate).

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CM-6709

Kansas City, has become a member of Jackson County Medical Society. Dr. Mantell is a native of New York, received his preliminary education at the University of Wisconsin, and his M.D. degree at Northwestern University in 1949.

**Robert L. Rogers,** M.D., 6711 Hadley St., Merriam, Kan., has become a member of Jackson County Medical Society. Dr. Rogers is a native of Kansas, received his preliminary education at Kansas University, and his M.D. degree at Kansas University in 1955.

**Wilbur R. Snider,** M.D., Professional Bldg., Kansas City, has become a member of Jackson County Medical Society. Dr. Snider is a native of Missouri, received his preliminary education at the University of Michigan, and his M.D. degree at the University of Michigan in 1955.

**Carl F. Strauss,** M.D., 701 E. 63rd St., Kansas City, has become a member of Jackson County Medical Society. Dr. Strauss is a native of Mississippi, received his preliminary education at Southwestern University at Memphis, Tenn., and his M.D. degree at the University of Tennessee in 1957.

## DEATHS

**Lowe, Horace A.,** M.D., 1639 E. Walnut St., Springfield, a graduate of St. Louis University, 1910; member of Greene County Medical Society; aged 79; died June 26, 1962.

**Simpson, Guy L.,** M.D., 13 The Orchards, St. Louis, a graduate of St. Louis University, 1909; member of St. Louis Medical Society; aged 75; died July 1, 1962.

**Upshaw, Paul O.,** M.D., Medical Arts Bldg., Springfield, a graduate of St. Louis University, 1924; member of Greene County Medical Society; aged 66; died July 2, 1962.

**Bolin, N. Venay,** M.D., 5720 Howe Drive, Shawnee Mission, Kan., a graduate of the University of Kansas, 1936; member of Jackson County Medical Society; aged 57; died July 4, 1962.

**Hart, Pearl V.,** M.D., Coatsville, a graduate of Keokuk Medical College of Physicians and Surgeons, 1906; member of North Central Counties Medical Society; aged 87; died July 5, 1962.

**Hans, Willard J.,** M.D., 7500 Murdock St., St. Louis, a graduate of Barnes Medical College, 1911; member of St. Louis County Medical Society; aged 78; died July 8, 1962.

**Dowell, Horace S.,** M.D., Chillicothe, a graduate of the University of Kansas, 1903; member of Grand River County Medical Society; aged 84; died July 8, 1962.

**Simon, Bettie H.,** M.D., 7543 Cromwell Drive, Clayton, a graduate of Washington University, 1930; member of St. Louis Medical Society; aged 55; died July 16, 1962.

**Knabb, Henry F. Sr.,** M.D., 5879 Southwest 60th St., Coral Gables, Fla., a graduate of St. Louis University, 1911; member of Greene County Medical Society; aged 75; died July 17, 1962.

## SOUTHEAST MISSOURI CANCER CONFERENCE

The ninth annual Southeast Missouri Cancer Conference is scheduled for Sunday, October 7, at Cape Girardeau. All sessions will be held at the Colonial Tavern Restaurant. Registration for the conference will start at 12:30 and the first session will get under way at 1:30. The banquet and evening session will begin at 6:30.

Guest speakers of the conference will be William T. Newton, M.D., Washington University School of Medicine, speaking on "Immune Response to Cancer and the Role of Virology"; Paul J. Murison, M.D., Tulane University School of Medicine, "Endocrine Therapy in Carcinoma"; Edward T. Krementz, M.D., Tulane University School of Medicine, "Regional Chemotherapy of Cancer"; and Gerald O. McDonald, M.D., University of Illinois College of Medicine, "Controlling Cancer Dissemination."

The conference is sponsored by the American Cancer Society, the Missouri State Medical Association, the American Academy of General Practice, and the Cape Girardeau County Medical Society.

It is estimated that social security benefits in Western Europe now approximate 15 per cent of national incomes. The range runs from 12.6 per cent in the Netherlands to 16.4 per cent in France.

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*HAY FEVER DISTRESS*

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- **With minimal** drowsiness, CNS or pressor stimulation

Isoclor Timesule, actual size

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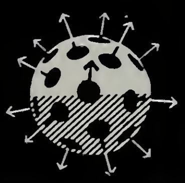

Schematic drawing of Timesule cell showing dialysis through permeable coating.

Release with the Isoclor Timesule is at a relatively even, constant rate, independent of gastrointestinal motility, pH, or enzymatic activity. Each Timesule pellet is actually a micro dialysis cell, consisting of a drug core with coating of dialyzing membrane of precisely controlled permeability. Approximately 20% of active drugs are released within one hour and 80% in 8 hours. Peaks and valleys of over-release and under-release are minimized for constant, controlled relief with minimum side effects.

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In a special form providing prolonged therapeutic effect.

**DOSE:** Adults: One Timesule every 12 hours, or as directed.

**WARNING:** Use with caution in patients suffering from hypertension, cardiac disease, hyperthyroidism or diabetes. Patients susceptible to the soporific effect of chlorpheniramine should be warned against driving or operating machinery should drowsiness occur.

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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Grand River Medical Society

The June meeting of the Grand River Medical Society and its auxiliary was held at the Strand Hotel in Chillicothe on Thursday night, June 14. This was a dinner meeting to which members of the Society invited as their guests local druggists, detail men and lawyers.

The featured speaker of the evening was Judge J. P. Morgan of Chillicothe. Judge Morgan presented a valuable discussion on "The Doctor and the Law."

The program this year was a change from the usual golf tournament held by the Society at its former annual June meeting.

Frank R. Daley, M.D., *Secretary*

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## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### Marion-Ralls-Shelby County Medical Society

A dinner meeting of the Marion-Ralls-Shelby County Medical Society was held on Tuesday night, June 19, on the "River Queen" anchored on the Mississippi River at Hannibal. In addition to the delightful atmosphere of the surroundings of the meeting, a most informative and practical scientific program was an important part of the evening's offering.

**Audience was interested and comfortable on the River Queen.**

William A. Knight Jr., M.D., St. Louis, Department of Internal Medicine, St. Louis University Medical School, spoke on "Liver Disease in Women." A large amount of audience participation during his presentation was good evidence of interest on the part of those present in this program.

**Dr. William A. Knight Jr. was the speaker.**

The evening festivities began with a social hour and an inspection of the "River Queen," then dinner and the scientific program. There was a good turnout of the Society membership. Ray McIntyre, Field Secretary of the State Medical Association accompanied Dr. Knight to the meeting.

Wyeth Hamlin, M.D., *Secretary*

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## FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Lincoln-St. Charles County Medical Society

John M. McCarthy, M.D., St. Louis, Department of Internal Medicine, St. Louis University Medical School, spoke at a meeting of the Lincoln-St. Charles County Medical Society at the Southern Air in Wentzville Tuesday night, July 24. He discussed the subject "Clinical Approach to Bleeding Dyscrasias."

A social hour and dinner preceded this excellent program.

V. P. Muenster, M.D., *Secretary*

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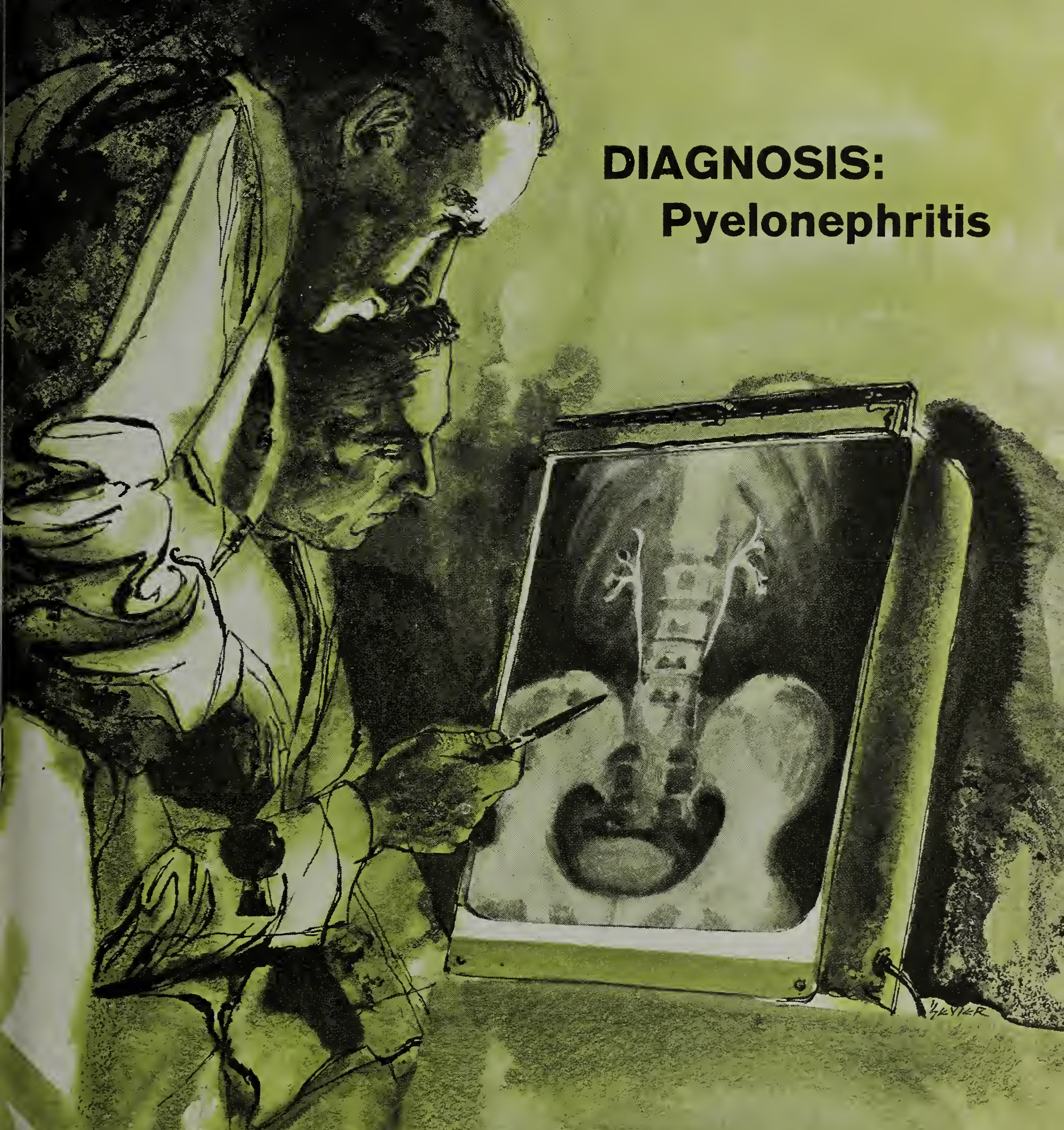
## SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

### Lafayette-Ray County Medical Society

The May meeting of the Lafayette-Ray County Medical Society was held May 8, 1962, at Maib's

DIAGNOSIS:
Pyelonephritis



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Cafe, Lexington. Dinner was served following a social hour.

After dinner the members discussed a training kit provided by the civil defense agency for the purpose of training laymen in methods of survival in case of atomic attack. The kit was displayed and demonstrated and an informal discussion held.

### Meeting of June 12

The June meeting of the Lafayette-Ray County Medical Society was held on June 12 at Maib's Cafe, Lexington. Dinner was served, following a social hour.

After dinner, the members discussed the ever present political threat to free medicine as now practiced in this country. Most members agreed that political interference into this field would result in poor medical care for the patient.

Following this informal discussion, the meeting was adjourned.

### Meeting of July 10

The July meeting of the Lafayette-Ray County Medical Society was held July 10 at Maib's Cafe, Lexington.

Following dinner, the members again held an informal discussion concerning the political threat to free medicine. It was pointed out that the present situation in Saskatchewan, Canada, again revealed that the patient will probably receive the blunt of the blow, if political ambitions continue to interfere with free medicine. Members were urged to become more active in political activities on local, state and national levels.

Wayne Boydston, M.D., *Secretary*

### West Central Missouri Medical Society

The regular meeting of the West Central Missouri Medical Society was held at the Nevada Country Club, Nevada, on Thursday evening, June 14, with the usual social hour preceding the dinner and scientific program.

This is an annual affair sponsored by the Society, to which the lawyers of the area are invited and a program of interest to both professions is presented. This year the program was entitled, "An Accident, an Abortion and Anxiety." This was headed by the guest speaker, Dr. Charles Wheeler, pathologist, General Hospital, Kansas City, who has, in addition to his M.D. degree, a degree in law from Iowa State University. He has combined these two degrees in his work. The program presented was in the form of a skit in which Dr. Wheeler assumed the role of a general practitioner who happened to take care of a woman who had been involved in a car wreck and was pregnant and who, following the accident, aborted. The case came to trial and Robert Ewing, attorney, Nevada, represented the plaintiff and Don Russell, Nevada, attorney, represented the defendant, the insurance carrier. Dr. Wheeler played an excellent role as the general practitioner who cared for the lady involved and was truly a fine witness. All enjoyed the presentation and feel that if called to the stand in the future, we should be better witnesses for the case in which we are to testify.

**President Giesler and members of the panel were seated at the head table.**

**Members of panel and local arrangement committee, Mr. Ewing, Dr. Wray, Dr. Wheeler, Mr. Russell and Dr. Pearse.**

There were 18 M.D.'s and 31 lawyers present for this meeting, with three guests. Previous meeting minutes were dispensed with and no business of the society was presented.

The meeting adjourned until September, at which time the usual annual "Athletic Injury" symposium will be presented in Nevada.

Carter W. Luter, M.D., *Secretary*

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## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid Missouri County Medical Society

A dinner meeting of the Mid Missouri Medical Society and the doctors' wives was held Thursday evening, July 26, in the Shepherd of the Hills Motel Restaurant in Lebanon. Evening festivities began with a social hour followed by dinner and then an interesting scientific program presented by Leo Neu, M.D., of Springfield.

Dr. Neu discussed "Radioisotopes in General Practice." This was an interesting and practical presentation.

M. K. Underwood, M.D., *Secretary*

## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Mineral Area County Medical Society

In spite of June and hot weather, the meeting of the Mineral Area County Medical Society on Thursday night, June 28, was well attended.

Those present were privileged to hear an excellent program given by John M. McCarthy, M.D., St. Louis, who discussed "The Clinical Approach to Bleeding Dyscrasias."

An interesting period of general discussion followed his formal presentation.

The meeting was held in the Clinic Building of the State Hospital in Farmington.

Paul Dennis, M.D., *Secretary*

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CORN OIL • 5.3 to 1.0
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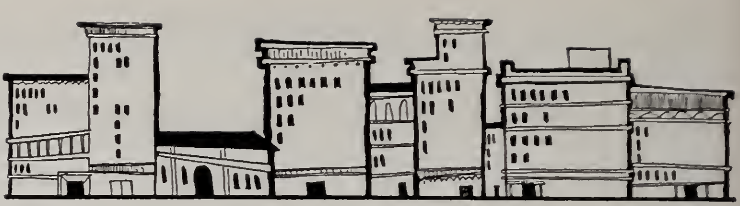
# From the Medical Schools



## ST. LOUIS UNIVERSITY

Four new posts have been announced at the St. Louis University Medical Center. A vice president for the Medical Center, a director of the Department of Neurology and Psychiatry, an assistant to the dean at the School of Medicine and an assistant director at Firmin Desloge Hospital of St. Louis University have been named.

### Vice President

Appointment of the Rev. Edward J. Drummond, S.J., as Vice President for the Medical Center of St. Louis University has been announced by the Very Rev. Paul C. Reinert, S.J., University president. Father Drummond's appointment became effective August 15.

He will serve as chief representative of the University administration at the St. Louis University Medical Center, including the School of Medicine, the School of Dentistry, the School of Nursing and Health Services, and the University-affiliated hospitals. He will coordinate the activities of these schools and act as liaison officer between the president and the board of trustees and the Medical Center.

Father Reinert said the creation of the new position was made necessary by the growth of the University's programs in the health fields.

Father Drummond currently serves as chairman of the Commission on Colleges and Universities of the North Central Association of Colleges and Secondary Schools, the accrediting agency for over 400 colleges and universities in a 19 state area in the Middle West. He is chairman of the Committee on Faculty Welfare in the College and University Department of the National Catholic Educational Association, and has served as chairman of the committee on Graduate Studies of the Jesuit Education Association.

He entered the Society of Jesus in 1924, and received three degrees from St. Louis University, a bachelor of arts degree in 1928, a master of arts degree in 1930 and the licentiate of sacred theology in 1938. He was ordained to the priesthood in 1937.

Rev. Edward J. Drummond, S.J.

After teaching at Creighton Prep in Omaha, St. Louis University and the University of Iowa, he received the doctor of philosophy degree from the University of Iowa in 1942.

In 1944 he was named dean of the Graduate School at Marquette University. He was named acting vice president in 1953, and vice president for academic affairs in 1954. In these positions he was closely associated with the operation of the School of Medicine, School of Dentistry and College of Nursing at Marquette.

### New Psychiatry Director

Dr. Edward T. Auer has been appointed director of the Department of Neurology and Psychiatry at St. Louis University effective September 1. He is former associate professor of psychiatry at the University of Pennsylvania and Chief of Neuropsychiatric Service at Abington Memorial Hospital in Abington, Pa.

Dr. G. O. Broun, dean, School of Medicine, has announced that Dr. Auer will be the director of the David P. Wohl Memorial Mental Health Institute, newest addition to the University's Medical Center.

The appointment of Dr. Auer as full-time director of the Department of Neurology and Psychiatry and the activation of the service at Wohl Institute will enable the School of Medicine to expand its activities in patient care, teaching and research in the field of mental health.

Dr. Edward T. Auer

Dr. Auer, a native of Philadelphia, was awarded his doctor of medicine degree from Temple University Medical School in 1943. He interned at Abington Memorial Hospital and after three years of military service, was appointed a Fellow in Psychiatry at the Institute of Living in Hartford, Conn. He also took postgraduate training at the Institute of the Pennsylvania Hospital and at the University of Pennsylvania.

Dr. Auer has been a member of the medical faculty at the University of Pennsylvania for the last 14 years.

He has been consultant in psychiatry at Grandview Hospital in Sellersville, Pa., since 1959, staff physician of psychiatric service at the Hospital of the University of Pennsylvania since 1957 and also served as consultant in psychiatry at Veterans Administration Hospital in Coatesville, Pa., from 1954 to 1957.

Dr. Auer is currently a member of the board of trustees of the American Fund of Psychiatry and of University Settlements in Philadelphia.

He is a member of the American Psychiatric Association, Group for Advancement of Psychiatry, Academy of Religion and Mental Health, American Association for the Advancement of Sciences, Society of Sigma Xi and many other societies.

### Assistant to the Dean

Dr. Richard J. Dames, instructor in internal medicine at the St. Louis University School of Medicine, has been appointed assistant to the dean for Intern and Resident Affairs.

Dr. G. O. Broun, dean, School of Medicine, said that Dr. Dames' duties would relate to the recruitment and other administrative duties in the Medical Center's internship and residency program.

Dr. Dames has taught in the School's Department of Internal Medicine since 1957. He is an attending physician at Firmin Desloge Hospital, St. Mary's Hospital and St. Louis City Hospital, where he is also director of the Unit No. 2 Arthritis Clinic, which is serviced by St. Louis University.

He was awarded his doctor of medicine degree by the University in 1951, and interned in internal medicine and took his residency training in internal medicine at St. Louis City Hospital.

Following his residency training, Dr. Dames was associated with a refugee program in Europe sponsored by the United States Public Health Service for a two year period.

He is secretary of the St. Louis Diabetes Society and a member of the St. Louis Rheumatism Society.

### Assistant Director at Desloge

John P. Byrne has been named assistant director at Firmin Desloge Hospital of St. Louis University, it has been announced by John B. Warner, director of the hospital.

Mr. Byrne was awarded his master of science degree in hospital administration by St. Louis University in 1961. He worked as an administrative resident at Desloge Hospital from 1960 to 1961 and as an administrative assistant from 1961 to 1962.

A native of Cleveland, Ohio, Mr. Byrne was awarded his bachelor of arts degree by John Carroll University in 1959. He is a graduate of St. Ignatius High School in Cleveland.

Mr. Byrne is a member of the Phi Chi medical fraternity.

### Research Development

The development of the first transistorized electromagnetic blood flow meter by Dr. Alfred W. Richardson, professor of physiology at the St. Louis University School of Medicine, has been announced by Dr. G. O. Broun, dean of the School of Medicine.

By employing transistor elements, Dr. Richardson has succeeded in producing a blood flow meter thirty times smaller than the four other models he had previously designed.

A boon to heart surgeons, the new flow meter is about the size of a house brick and is powered by an amplifier no bigger than an ordinary pack of matches. The newer model has the smallest amplifier circuit ever produced for this purpose.

Dr. Theodore Cooper, assistant professor of surgery, and Dr. Walter J. Ciszczon, research assistant in surgery, aided Dr. Richardson in testing and improving the meter in the University's Center for Cardiovascular Research.

Dr. Richardson worked for months in modifying and perfecting the input and output circuits of the small amplifier to achieve a precise and stable device of high sensitivity. Dr. Richardson's research was made possible by the support of the Office of Naval Research and the St. Louis Heart Association.

The sensitive flow meter records the slightest movements of blood in the biologic system or in a tube, and is valuable both to the researcher in the experimental animal laboratory and to the heart surgeon who performs open heart operations. It has proved to be more efficient and stable than former larger models.

The meter picks up the measurements of blood flow as blood is pumped through the heart-lung machine in open heart surgery. Readings appear on a dial and are also recorded on paper.

It converts the physical movement of blood into a tiny electrical voltage. These few millionths of a volt are then amplified up to a level of one or more volts that can be read out on any common commercial recorder.

Dr. Richardson pioneered in the field of radar and other space research problems and has been a leading investigator since 1946.

### Election

Dr. C. Rollins Hanlon, director of the Department of Surgery at the St. Louis University School of Medicine, has been elected president of the International Cardiovascular Society.

The society meets annually and holds an International Congress every second year. Next year the society will gather in Rome, at which time Dr. Hanlon will deliver his presidential address.

Dr. Hanlon's new office is for a two year period. He is treasurer of the American Association for Thoracic Surgery and former president of the Society of University Surgeons and the St. Louis Surgical Society.

The International Cardiovascular Society is composed of surgeons interested in surgical treatment of the heart and great blood vessels.

## UNIVERSITY OF MISSOURI

### New Academic Appointments

Effective July 1, 1962, the following members were appointed to the department of surgery attending staff:

George N. Austin, M.D., chief, section of orthopedic surgery and associate professor of surgery, formerly of Vanderbilt University School of Medicine, Nashville, Tenn.

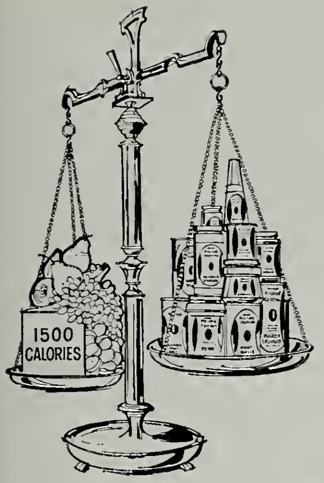
James W. Mackenzie, M.D., chief, section of thoracic and cardiovascular surgery, and assistant professor of surgery, formerly of the University of Michigan Medical Center, Ann Arbor, Mich.

Hal G. Bingham, M.D., chief, section of plastic surgery and instructor in surgery, formerly of the University of Kansas and the University of Iowa.

Authur E. Baue, M.D., instructor in surgery, formerly with Massachusetts General Hospital, Boston, and recently with the department of thoracic surgery, Frenchay Hospital, Bristol, Eng.

Frank L. Mitchell, M.D., instructor in surgery, formerly chief resident of surgery at the Medical Center.

The department of radiology welcomed three



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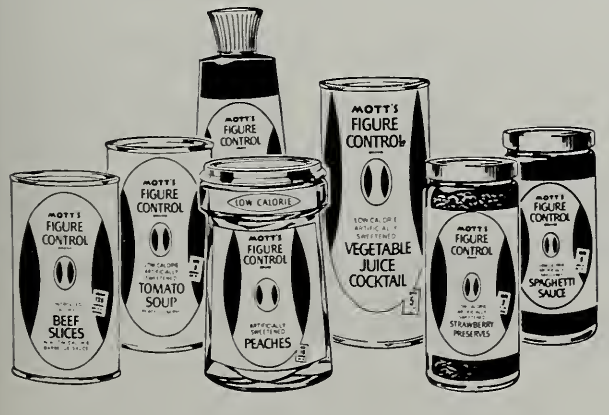
| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Apple-Grape Drink | ½ cup | 20 | 52 |
| Five-Fruit Juice Breakfast Drink | ½ cup | 20 | 52 |
| Braised Beef and Vegetables | 6½ oz. | 184 | 380 |
| Meat Balls in Brown Gravy | 3½ oz. | 84 | 280 |
| Chopped Chicken Livers | 1 oz. | 31 | 100 |
| Chicken a la King | 3 oz. | 72 | 230 |
| French Style Dressing | 1 tbsp. | 10½ | 60 |
| Brown Gravy | 1 tbsp. | 7 | 21 |

| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Applesauce | ½ cup | 48 | 90 |
| Fruit Cocktail | ½ cup | 44 | 90 |
| Cherry Pie Filling | 1 oz. | 20 | 60 |
| Chocolate Topping | 1 tbsp. | 8 | 63 |
| Preserves (Peach, Strawberry) | 1 tbsp. | 9 | 55 |
| "Maplette" Syrup | 1 tbsp. | 9 | 55 |
| Liquid or Powder Sweetener | (to equal 1 tbsp. of sugar) | 0 | 16 |



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new resident physicians July 1. Dr. Charles Simmons is a graduate of the College of Medical Evangelists and served his internship at Porter Hospital, Denver, Colo.

Dr. Wayne Mason was graduated from the University of Kansas Medical School and interned at Hillcrest Medical Center, Tulsa.

Dr. William Wilson, a graduate of the University of Missouri School of Medicine, served his internship at the U. S. Naval Hospital, St. Albans, N. Y. Dr. Wilson also spent two years in private practice in Flour Bluff, Texas, and came to the University of Missouri from the U. S. Naval Hospital, Corpus Christi, Tex.

### Meetings and Talks

Dr. Frank B. Engley Jr., professor and chairman of the department of microbiology, participated in a summer teaching institute for high school teachers at Western Kentucky State College, July 9 and 10, at Bowling Green, Ky. The institute was sponsored by the National Science Foundation. Approximately 50 attended. Dr. Engley also visited the 35th Infantry Division of the Missouri National Guard at their summer encampment at Camp Ripley, Minn., to observe the National Guard during summer field conditions, June 29 to July 1.

Dr. David G. Hall III, associate professor and chairman of the department of obstetrics and gynecology, attended the first organizational meeting of the Association of Professors of Obstetrics and Gynecology June 22 to 25 in Chicago. Dr. Carl C. Pearman, resident physician also attended the meeting.

Dr. Constantine S. Anast, associate professor of pediatrics, gave a presentation of original papers at a meeting of the Endocrine Society in Chicago, June 21 to 23. A symposium of clinical endocrine problems was also presented.

Dr. Ernest E. McCoy, assistant professor of pediatrics, spoke at a graduate symposium on mental retardation at St. Louis University on June 20.

Dr. James M. Pickens, instructor in pediatrics, attended the meeting of the abstractor's committee for the journal, *Diabetes*, June 22, prior to the beginning of the American Diabetes Association meeting, held June 22 to 24. Recent advances in research in diabetes mellitus were discussed. The meeting was held in Chicago.

Dr. J. O. Sines, associate professor and chief

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of the psychology section, and Walton Smith, computer coordinator, participated in a two-day discussion with psychologists at Mayo Clinic and computer representatives from IBM regarding computer applications in psychological testing and test interpretation, June 18 to 20.

Dr. Philip J. Marco, assistant professor of psychiatry, spoke on reflections of a psychiatrist in the field of public health and preventive medicine at the Illinois State Medical Society, Preventive Medicine Section meeting in Chicago, May 16. On May 24 Dr. Marco gave a talk to members and guests of the Boone County Medical Health Association in Columbia, on "Preventive Psychiatry." At a meeting of the Knights of Columbus of Columbia, Dr. Marco spoke on the development of psychiatric treatment including history and the medical aspects of treatment, May 27. On May 17, he gave a talk to a PTA group at the Sacred Heart Church in Columbia on development of psychiatric treatment including history and the medical aspects of treatment.

Dr. Robert E. Froelich, assistant professor of psychiatry, Dr. Carl Marienfeld, professor and chairman of the department of community health and medical practice, and Dr. Henry Guhleman, clinical associate professor of psychiatry, attended a meeting of the Missouri Division of Health at the Nevada State Hospital, June 26. Current plans of the Division of Health, the Division of Mental Diseases, and the University of Missouri School of Medicine for community mental health were discussed. Dr. Froelich also attended a meeting of the Society of Motion Picture and Television Engineers, June 19, at Franklin Park (Chicago), Illinois. A review of the history, present development and future plans of color television were discussed by chief Motorola Color Television Engineer, Robert Hansen.

Dr. Gwilym S. Lodwick, professor and chairman of the department of radiology, recently attended the meeting of the Missouri Society of X-Ray Technicians in Kansas City where he discussed some of the recent goals and actions of the Board of Trustees of the American Registry of X-Ray Technicians. Mr. George F. Koenig also participated in the meeting and Mr. Darrell Wood attended. Mr. Koenig is assistant professor of radiologic technology and chief radiologic technician, and Mr. Wood is a radiologic technician. Dr. Lodwick was recently guest speaker

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Important: Before prescribing DBI-TD, the physician should be thoroughly familiar with directions for use, including indications, dosage, possible side effects, precautions and contraindications. Write for complete literature.

1. Pomeranze, J.: Clinical Med. 8:1155, June 1961. 2. Krall, L. P. and Bradley, R. F.: Geriatrics 17:337, May 1962. 3. DeLawter, D. E. et al.: J.A.M.A. 171:1786, Nov. 28, 1959. 4. Perkin, F. S.: J.A.M.A. 173:36, May 7, 1960. 5. Pearlman, W.: Phenformin Symposium, Houston, Feb. 1959. 6. Radding, R. S. et al.: Metabolism 11:404, April 1962. 7. Gold, A. et al.: Applied Therapeutics 2:137, 1960. 8. Brown, G. D. and Gabert, H.: Applied Therapeutics 4:451, May 1962. 9. Gold, A.: Applied Therapeutics 4:466, May 1962.

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at the meeting of the Iowa Chapter of the American Academy of General Practice in Fort Madison, Iowa. He spoke to the group on "The Practical Approach to the Diagnosis of Bone Neoplasms." He also was guest speaker at the meeting of the Indiana Roentgen Society in Indianapolis, Ind. His topic of discussion was "The Role of the Computer in Medicine as Seen by a Radiologist." Dr. Lodwick, Mr. Koenig and Mr. Wood recently returned to Columbia after a trip to Seattle, where they attended the Fourth National Convention of the American Society of X-Ray Technicians and the meeting of the Trustees of the American Registry of X-Ray Technicians. Mr. Koenig is chairman of the education committee of the organization.

Dr. Theodore E. Keats, professor of radiology, was recently a guest of the University of Virginia School of Medicine in Charlottesville, Va. He also conferred with one of the Directors of the Commonwealth Fund in New York early in June.

Dr. Henry McQuade, associate professor of radiology, and Dr. Paul Wheeler, resident physician in radiology, attended a two day conference on "Radioisotope Kidney Function Tests" at Columbus, Ohio.

From June 24 to 29 Dr. Ian Thompson, professor of surgery, chief, section of urology, and Dr. Laszlo Kovacsi, teaching fellow in surgery, attended the AMA convention in Chicago. A paper and a scientific exhibit on Supravesical urinary diversion—a new technic was presented there as well as a movie by the Section of Urology on Supravesical urinary diversion. Dr. Thompson also attended the Canadian Urological meeting in Fort William, Canada. There he presented a scientific paper and a movie. The meeting was held June 26 to 27.

Dr. Eigil Dingson has completed his residency training here at the University of Missouri, and has returned to Norway where he will enter private practice.

Dr. Aimee N. Moore, professor of food and nutrition, attended a meeting of the American Home Economics Association in Miami, Fla., June 25 to 29. Approximately 4,000 professional persons attended. Dr. Moore participated in an institution management section meeting while there. She has been recently appointed vice-chairman of the institution management section.

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### Ellis Fischel State Cancer Hospital

The Missouri State Cancer Commission, advisory body to the Missouri Division of Health, has obtained a charter for the establishment of the Missouri Medical Research Foundation, an organization whose aim is to support studies for improved detection, care, treatment and rehabilitation of cancer patients treated at the Ellis Fischel State Cancer Hospital. The initial capital endowment for the Foundation is $14,343.03.

The Hospital library has been expanded by the addition of 510 new volumes. A comprehensive reference library dealing with all aspects of neoplastic diseases is the ultimate goal of the expansion project.

The medical staff has participated in the following professional programs:

Dr. John S. Spratt, chief surgeon, discussed the biological characteristics of colonic neoplasms and the rates and growths of cancers before the Southwest Missouri Chapter of the American College of Surgeons at Springfield on May 10. He participated in the panel discussion on "Polyps of the Colon" at the tenth annual meeting of the Society of Air Force Clinical Surgeons in St. Louis on May 14.

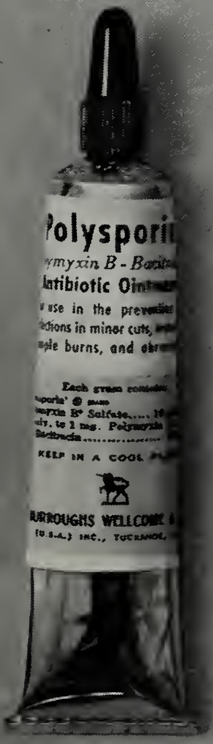
Dr. Robert T. L. Long, surgeon, presented "Alterations of the Blood Volume With Central Arterio-Venous Shunts" at the Fundamental Forum of the St. Louis Surgical Society on May 8.

Dr. Ernesto Ego-Aguirre, resident in surgery, presented "Pathological Anatomy and Surgical Repair of Massive Perineal Hernias Succeeding Pelvic Exenteration" before the Southwest Missouri Chapter of the American College of Surgeons at Springfield on May 10.

Dr. Richard E. Johnson, pathologist, attended the Arthur Purdy Stout Society in Detroit, Mich., June 8-9.

Dr. Jose M. Sala, chief radiotherapist, presented the Jacob S. Roden Lecture, "The Treatment of Endometrial Carcinoma," April 30, and served as moderator for a panel discussion, "Clinical Use of Irradiation and Chemotherapy," during the seventh Annual Spring Clinical Conference, May 10. Both programs were presented in the University of Missouri Medical Center Auditorium.

Dr. A. McChesney Evans, internist, presented papers, appeared on committees and panels at the following places and dates: May 2, "The Chemotherapy of Cancer," Joint Medical-Surgical Conference, St. John's Hospital, St. Louis;



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May 7, "How the Ellis Fischel Hospital Serves the People of Greene County," Community Planning Council, Burge Protestant Hospital, Springfield; May 9, "Response to Cancer," panel discussion, Spring Clinical Conference, University of Missouri, Columbia; June 6, "The Problems of the Food and Drug Administration," Altrusa Club, Columbia; June 12, "Some Aspects of the Cancer Problem," district meeting of American Cancer Society, Paris; June 21, "New Developments in Cancer," panel discussion, Jasper County district meeting, Joplin.

### Instruction of Nursing Personnel in the Care of the Cancer Patient

Nursing personnel of the Division of Health are afforded an opportunity to attend a five day orientation course of training in detection, nursing care and home care of the cancer patient which is conducted each month at the Ellis Fischel State Cancer Hospital.

The course, sponsored by Public Health Nursing, Section of Local Health Services, State Division of Health, is limited to eight nurses each month and is supervised by Mrs. Cora Richards, Advisor on Nurse Education at the Cancer Hospital. Lectures, group discussions, and observation periods on the inpatient wards and in the outpatient clinic are employed in presenting the instruction.

The Social Service Department, under the direction of Mrs. Miriam Hoag, is responsible for all admission appointments to the hospital. Each nurse receives instruction on admission policies and procedures which she can use to assist patients in applying for admission to the hospital.

Lectures and films emphasize the importance of early case finding. The social, emotional and rehabilitation aspects of chronic diseases, and the total patient care concept is stressed so that nursing care instruction given to the patient in the hospital can be coordinated and followed in the home or institution after discharge from the hospital.

The nurse receives instruction for the care of skin reactions following radiotherapy. She is given a copy of the instructions provided to the patient upon discharge from the hospital for interpretation and use should the need arise. The occasional need for radical surgery for treatment of certain cancer patients is explained, as are the means employed to obtain acceptance and a willingness of the patient to care for himself fol-

(Continued on page 912)

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DOCTOR RETIRING—Office for rent. Desirable location, four rooms, air-conditioned, ground floor. Also a three room ground floor office available. Microscope and some instruments, half catalogue price. Located at Fulton, Missouri. Population over 10,000; 84 bed open staff hospital. Four grade schools, a Junior High, High school and Parochial school. Two colleges, parks, swimming pools and factories. Contact R. N. Crews, M.D., Fulton, Missouri.

FOR SALE—Active established general practice, with large completely equipped office, including lab and x-ray. Approximately 30,000 area population in fast-growing agricultural community. Will introduce. Contact Box 274, c/o Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

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PHYSICIAN WANTED—Marionville, Missouri has no doctor. Fifteen hundred population, fine climate, close to big fishing lakes. Write Maurice Wiley, Superintendent of Schools, Marionville, Missouri.

FOR SALE—Lucrative general practice—Central St. Louis County. Leaving city—retiring. Reasonable. For further information, write Box 272, c/o Missouri State Medical Association, 623 Missouri Theatre Building, St. Louis 3, Mo.

WANTED—Young Internists—Board Certified or Board Eligible interested in joining a well established group in St. Louis, Missouri, consisting of Board Certified Internists, Surgeons, Ob-Gyn, Pediatrician and Urologist. Good starting salary and early partnership. Excellent hospital affiliation. Please reply to Box 273, c/o Missouri State Medical Association, 623 Missouri Theatre Bldg., St. Louis 3, Mo.

PHYSICIAN WANTED—Young man to associate with 7 man group in town of 5500. Training in general practice including pediatrics, pediatrics alone, or general medicine alone would be acceptable if service obligations have been satisfied. Modern, progressive community 70 miles from St. Louis. Contact, F. R. Crouch, M.D., Medical Arts Clinic, Farmington, Missouri.

ASSOCIATE GENERAL PRACTITIONER wanted: An established practice with a new office building in a growing town of 3,000 near Kansas City, Missouri. Plans for a partnership agreement when mutually desired. Contact, A. W. Eklund, M.D., Pleasant Hill, Mo.

FOR SALE—X-Ray machine, available September 15. 100 Ma. Fischer Fluro-Bucky Table Combination with accessories, very reasonable. Also Burdick Infra-Red Baking Lamp, treatment table, Maico Audiometer, 4x6 card files and instrument cabinet. Contact, J. H. Duemler, M.D., 1504 S. Grand Blvd., St. Louis 4, or call VE 2-2596 after 6:00 p.m.

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# Missouri Medicine in Review

## FORTY YEARS AGO

During July the entertainment committee of the Jackson County Medical Society arranged for a one-day doctors' golf tournament and invited each member of the Society who played golf to participate. The tournament was held at the Hillcrest Country Club, Kansas City, on the afternoon and evening of July 21, followed by a dinner on the porch of the clubhouse. In the championship class, Dr. W. L. McBride was first with an 85, and Dr. J. W. Beil and Dr. M. H. Clark tied for second with 87 each.

On August 17, the New Madrid County Medical Society, in conjunction with the Field Agent of the U. S. Public Health Service, Dr. Wm. N. O'Bannon, conducted a charity clinic for the removal of adenoids and tonsils at New Madrid. Altogether 28 cases were operated on.

Dr. F. L. Ogilvie, of Blodgett, is a candidate for Representative from Scott County.

Mayor Kiel of St. Louis has removed the Humane Society from control of the dog pound because the Humane Society declined to deliver impounded dogs to the medical schools for scientific purposes, as authorized by an ordinance passed by the Board of Aldermen recently. The Humane Society has been instrumental in having a suit filed against the city to restrain the city officers from selling the dogs to medical schools on the ground that the ordinance is unconstitutional.

Dr. J. E. Jordon of Columbia was the recipient of a gold watch presented to him by the members of the Boone County Medical Society and the physicians of the county recently, as a mark of appreciation of his excellent service as secretary of the Society and staff of the Boone County Hospital.

As a result of the stimulating suggestion of President Porras, of Panama, it has been resolved that a fitting memorial shall mark the humanitarian service of the late Major General William C. Gorgas, and the beneficent influence of his life and work on mankind throughout the world.

## TWENTY-FIVE YEARS AGO

The Council of the Missouri State Medical Association met July 14 at the Melbourne Hotel, St. Louis. Dr. M. Pinson Neal, Columbia, Chairman, presided. Drs. W. H. Breuer and M. Pinson Neal, Delegates to the Atlantic City Session of the American Medical Association, discussed matters brought out at that Session, among these the address of United States Senator J. Hamilton Lewis of Illinois. The Council went on record as being opposed to state medicine in any form and ordered that the Board of Trustees of the American Medical Association be informed of this action. The talk by Senator Lewis had caused confusion as to the status of the probability of state medicine and its relationship to the Social Security Act. It was brought out in the Council session that state medicine was not a part of the Social Security Act at present but that there was a possibility of such a clause being introduced in the Congress, although such action had not been taken as yet.

Kansas City was one of nineteen larger cities in the United States that had no deaths from diphtheria during 1936.

Nineteen radiologists from Missouri will participate in the Fifth International Congress of Radiology which convenes in Chicago at the Palmer House September 13 to 17. It is the first time this Congress has convened in this country and physicians and physicists from thirty nations and four continents are expected to attend. Missouri members who will take part in the Congress are Drs. A. N. Arneson, Edwin C. Ernst, James B. Costen, Sherwood Moore, Wendell G. Scott, Fred J. Taussig, W. K. Mueller, Joseph C. Peden, Edgar W. Spinzig, Paul F. Titterington and Oscar C. Zink, St. Louis; David S. Dann, Everett R. DeWeese, Ira H. Lockwood and E. H. Skinner, Kansas City; J. S. Summers, Jefferson City; H. D. McGaughey, Joplin; H. J. Ravold, St. Joseph, and Paul F. Cole, Springfield.

*(Continued on page 914)*

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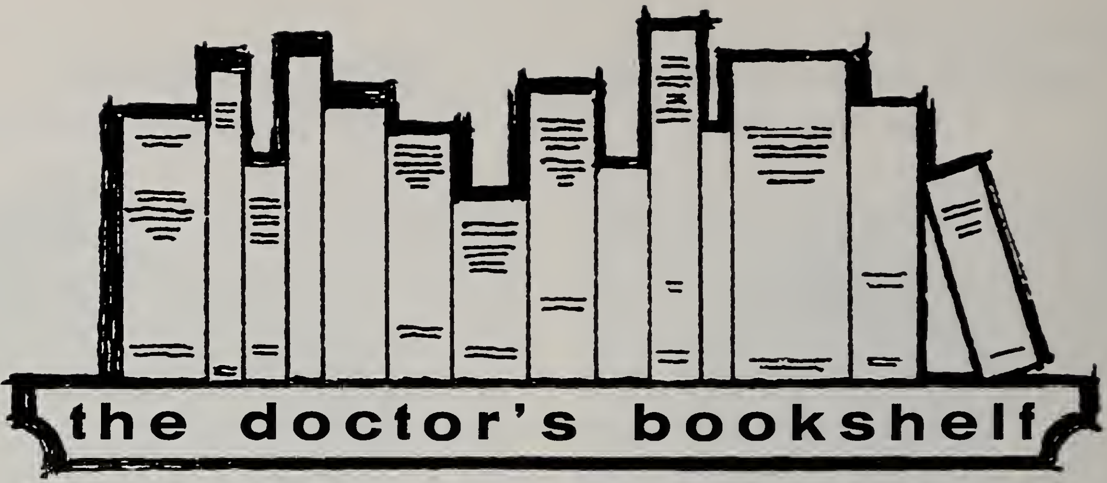

## BOOK REVIEWS

Renal Function, by W. J. O'Conner. Williams & Wilkins, Baltimore, 1962.

The author, senior lecturer in physiology at the University of Leeds, England, presents renal function as the regulation of the composition of urine by the action of extrarenal agents which reach and react upon the kidney. Minimal emphasis is placed on "intrarenal" mechanisms such as tubular and glomerular roles. The author fearlessly criticizes many recent works on renal physiology, but presents sound experimental data to support his views.

The last portion of the book is devoted to more recent and as yet unproven theories which bear further investigation. The literary style permits easy readability, and periodic subject summaries help logically to subdivide the material. Good reference lists and adequate subject and author indices round out a worthwhile text.

C. H. N.

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The Kidney, by H. E. de Wardener, 2nd ed. Little, Brown and Company, Boston, 1961.

The author, professor of medicine at the University of London, presents first a good text of renal structure and physiology in basic detail. Next there are presented four common renal syndromes: nephrotic, acute nephritic, acute, and chronic renal failure are presented from the aetiologic, structural, clinical and therapeutic standpoints. The remainder of the text deals with the renal role and manifestations of systemic conditions such as diabetes mellitus, pregnancy, gout, amyloidosis, irradiation reaction and cardiovascular diseases. A short section deals with congenital malformations. An appendix provides diet lists for various purposes, even to the selection of foods for the inevitable British "tea snack." A complete index finishes a fine book, the reading of which makes one much more "at home" with the kidney.

C. H. N.

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Differentiation Between Normal and Abnormal in Electrocardiography, by Ernst Simonson. C. V. Mosby Company, St. Louis, 1961.

There are at the present time more than enough excellent textbooks on the subject of electrocardiography and one's first reaction is why another? However, this is an unusual book in that it is the first attempt to devote an entire volume to one of the first and most important steps in electrocardiographic interpretation, that is, the differentiation between normal and abnormal. Although, as the author states, some attempts have been made to include this in other texts on this subject, these have been less than adequate. Lack of knowledge in this regard has resulted in much iatrogenic heart disease, or, as defined by Prinzmetal, "heart disease of electrocardiographic origin."

The author attempts by statistical analysis better to define those electrocardiographic diagnoses which are borderline normals since it is in this group that most erroneous diagnoses are made resulting in cardiac neuroses. The author furthermore attempts to evaluate more fully the various functional tests available for cardiac fitness.

This book is an excellent reference for an in-

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ternist with more than an average interest in this field and also for those who are teaching or in charge of electrocardiographic departments in hospitals. The novice would do well to read this book from cover to cover only if he is interested in going into this field.

The author is certainly uniquely fitted to write this book and has done a momentous piece of work. J. J. H.

Postpartum Psychiatric Problems, by James Alexander Hamilton, Ph.D., M.D., Associate Clinical Professor of Psychiatry, Stanford University School of Medicine, Stanford, California; Chief of Service, Psychiatry, Saint Francis Memorial Hospital, San Francisco, California. C. V. Mosby Company, St. Louis, 1962. Price: $6.85.

Puerperal psychosis is a problem almost certain to confront the psychiatrist and any other doctor doing a considerable amount of obstetrics. The incidence, however, is so low that the obstetrician cannot hope to acquire adequate knowledge of the condition through his own experience.

The author has utilized his psychiatric training and uncommonly large number of cases to describe the similarities and differences between puerperal psychoses and the commonly recognized psychiatric syndromes.

This little book contains an excellent historic review, some of which is repeated in various contexts. The information presented provides insight for the obstetrician and outlines medical treatment that may obviate or support psychiatric therapy. The author suggests that delirium and other early manifestations may be an abnormal response to elevated 17-hydroxycorticoids. Considerable evidence is presented to suggest that the later delirium or depressive phase is a manifestation of hypothyroidism.

This monograph is highly recommended for everyone dealing with puerperal patients, psychotic or not. The distinctions between puerperal psychoses and those not associated with pregnancy would appear valuable to the psychiatrist. E. G. H.

Early Detection and Diagnosis of Cancer, by W. O'Donnell; E. Day, and L. Venet. C. V. Mosby Company, St. Louis, 1962.

This book is written in semi-outline didactic form. Numerous line drawings, visual aids, a few representative x-ray films of pertinent sites and a few photographs of particular cancers complete the book. All are well done. It is a comprehensive, practical guide to the essential facts about cancer—how to look for and diagnose cancer in the physician's office and what to do about it initially. If the cancer is not common or accessible, it is not included.

A selected list of source material, but not a bibliography, has been compiled. Principles and details of treatment are not discussed. Five year survival rates are not tabulated. The authors have concentrated on those methods and procedures in the evaluation of a patient which are practical from the standpoint of time, expense and patient convenience.

It is a useful guide for the practicing physician in all branches of medicine, who has to deal with cancer, as well as for medical students, internes and residents, who want to become acquainted with the fundamentals of clinical cancer practice. L. H. J.

## BOOKS RECEIVED

Shock Pathogenesis and Therapy, An International Symposium, Sponsored by Ciba, edited by K. D. Rock. Springer-Verlag, Berlin, Gottingen, Heidelberg, 1962. Price: $13.00.

Ciba Foundation Study Group No. 11, The Mechanism of Action of Water-Soluble Vitamins, A. V. S. DeReuck, M.Sc., D.I.C., A.R.C.S.; and Maeve O'Connor, B.A. Little, Brown and Company, Boston, 1961. Price: $2.50.

General Pathology, Based on Lectures Delivered at the Sir William Dunn School of Pathology, University of Oxford, edited by Sir Howard Florey, Professor of Pathology, third edition. W. B. Saunders Company, Philadelphia, 1962.

## INSTRUCTION OF NURSING

*(Continued from page 906)*

lowing these radical procedures. The nurse is advised of the relative new use of chemotherapeutic agents as a palliative means of treatment for certain cancer patients. The nurse is oriented as to why the hospital does not routinely provide terminal care for cancer patients in order that she can explain this policy in her community, and assist the patient and the family in planning for this type of care in the home or in community facilities.

Reports indicate that the program has stimu-

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*Schwartz, I. R.:
*Current Therap. Res.* 3:29, Feb., 1961.

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lated nurses of the Division of Health to do more about cancer control and has helped them to visualize their potential contribution to cancer control programs. It has broadened their knowledge of the disease, enabling them to do more effective home visiting and education in their communities. It has helped them to interpret better the facilities and services of the cancer hospital and other community resources for care of the cancer patient. It has helped them see the value of teaching the patient and correlating the hospital's teaching with circumstances in the patient's home. It has shown them the value of follow-up service for the cancer patient and has helped them to interpret this to family, patients and community. Last, but certainly not least, it has emphasized that enlightened nursing services must always be rendered under medical direction.

## WOMAN'S AUXILIARY

*(Continued from page 850)*

drive home the idea to all doctors' wives that the work the Auxiliary is doing is so important that they cannot afford not to take part. As Mrs. Pohlman suggests, try to discover why some wives refuse to join. Perhaps in their reasons we may find the solutions to many of our problems.

This year should mark a year in which we in Missouri take a strong step forward in the area of membership. With our own Betty Sutter as the new North Central Regional Vice-President whose special assignment is membership, we have the added incentive of working hard to show our pride in Betty and her many accomplishments, so that her reports during the coming year will reflect, by our increased activity, the special niche she occupies in our hearts.

Mental illness has long been recognized as one of our nation's greatest health problems, and nothing less than action on the part of all citizens, professional and lay, is needed to cope with it. Education, prevention, volunteer services, recruitment of personnel, research—in all these fields we can work for the betterment of conditions in our own communities. It is infinitely less painful and expensive to work to prevent mental illness than it is to correct the problems after they arise. By giving active leadership in this field to local groups such as study clubs, PTA's, Scouts, youth clubs and church organizations, we can have influence for good over the behavior of our young people when it counts most—during the formative years.

This is by no means a complete listing of our facets of program. There is Rural Health, Safety, Senior Citizens Service, Doctor's Day, Radio-TV-Films and International Health Activities. Due to limited space I shall have to wait until next month to go into these. Suffice it to say, we have our hands full. Each county must recognize this fact, however, that no one Auxiliary can possibly do everything. It is not expected to. Rather, as our new National President, Mrs. William G. Thuss, said in her theme for the year, "Aim for Excellence in Achievement,"—quality rather than quantity—and your reward will be that good feeling of satisfaction for a job well done.

## MISSOURI MEDICINE IN REVIEW

*(Continued from page 908)*

### TEN YEARS AGO

Two hundred seventy-one licenses to practice medicine in Missouri were issued by the Missouri State Board of Medical Examiners in July; 238 after applicants had taken written examinations and 33 were issued by reciprocity.

F. T. H'Doubler, M.D., Springfield, was elected president of the Missouri State Board of Medical Examiners at a recent meeting. William J. Shaw, M.D., Fayette, was elected vice president, and W. O. Finney, M.D., Chaffee, secretary-treasurer. Other members of the board are Edwin C. White, M.D., Kansas City; Edwin C. Schmidtke, M.D., Columbia, and Walter L. Brandon, M.D., Poplar Bluff.

The Missouri Academy of General Practice has scheduled a series of five postgraduate evening meetings in nine centers over the state. These are Cape Girardeau, Kennett, Louisiana, Columbia, Rolla, Nevada, Springfield, Warrensburg, and Chillicothe. The dates of the sessions in these towns will be September 25, October 30, November 20, December 4 and January 22.

From July 1, 1950, to June 30, 1951, 298 (2.1 per cent) blood specimens of 14,039 persons tested in state laboratories in Missouri gave a positive agglutination test for brucellosis.

The Hill-Burton program, Public Law 725, in effect since August 13, 1946, has brought to Missouri $15,548,875.00 of federal funds which have and are building some $33,600,000.00 worth of hospital beds, teaching facilities and health centers.

Daniel L. Sexton, M.D., St. Louis, will preside as president at a three day meeting of the Mississippi Valley Medical Society to be held in St. Louis October 1 to 3.

# Curiosa et Trivia

WILLIAM B. McCUNNIFF

California has about two million disabled persons: alcoholics, cardiacs, diabetics, epileptics, addicts, mental defectives, etc. AND over 70 per cent of these have driver's licenses!

---

Now they're on it too! The growth of Brucella abortus is inhibited by meprobamate, according to Rutgers University researchers.

# Capsule Clinics

- Echo virus infection during pregnancy does not increase the incidence of congenital abnormalities in the offspring. Kleinman, H. et al., Pediatrics **29**:261, 1962.
- Controlled epidemiologic studies reveal a definite etiologic relationship between para-influenza 2 virus and the croup syndrome. Kim, H. W. et al., Pediatrics **28**:614, 1961.
- Vaccination with BCG vaccine in infancy resulted in a 75 per cent reduction in the incidence of tuberculosis. Rosenthal, S. R. et al., Pediatrics **28**:622, 1961.
- Approximately 98 per cent of children diagnosed sociopathic personality showed antisocial behavior 30-odd years later. O'Neal, P. et al., Am. J. Psychiat. **118**:1114, 1962.
- SGO-T and SGP-T are commonly elevated in infectious mononucleosis and often aid in establishing a working diagnosis. Gold, J. A. et al., New York State J. M. **62**:1796, 1962.
- Increased coital frequency tends to hasten conception in the absence of contraception but does not materially increase chances of an accidental pregnancy when contraception is practiced. Contraceptive practice becomes progressively more faithfully used as desired family size is reached. Potter, R. G. et al., Fertility & Sterility **13**:259, 1962.
- Menstrual behavior and reproductive capacity of daughters born of eclamptic mothers lend no support to the assumption that maternal toxemia induces permanent damage in fetal ovaries. Chesley, L. C. et al., Obst. & Gynec. **19**:754, 1962.

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From Clinical Clippings, 1962.

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# WASHINGTON

### H.R. 10 Before Senate

For the first time since it was introduced over a decade ago, the House-passed H.R. 10 was voted on by the Senate. H.R. 10 has been supported steadily by the A.M.A. . . . It would grant self-employed persons, including physicians, a tax deduction up to a maximum of $1,250 for a retirement program, provided a similar plan is established by the self-employed for his employees.

Senator Everett Dirksen presented H.R. 10 on August 23 in the form of an amendment to the President's tax bill (H.R. 10650). At the same time, Dirksen introduced four other amendments to H.R. 10650, including one to modify the means test under the Kerr-Mills Act. This amendment is the same as S. 2811, which was introduced earlier by Senator Dirksen. Under this proposal the aged individual applying for health care benefits under Kerr-Mills would become eligible by merely making a statement "under oath" that he qualifies. Two other amendments proposed by Dirksen would: (a) raise from the present $1,200 to $1,800 the amount people getting social security retirement benefits may earn without any reduction in their government checks; and (b) exempt persons of 60 years and over from the payment of capital gains taxes on profits they might receive from the sale of their homes, occupied five years or longer.

### Senate Passes Drug Bill

The Senate passed on August 23 a new drug control bill (S. 1552) which provides tighter federal controls over the pharmaceutical industry. The vote was 78 to 0. Earlier, the Senate killed an amendment supported by Senator Estes Kefauver (D., Tenn.) which would have required compulsory licensing of prescription drugs when the price to the druggist represented a mark up of more than 500 per cent in the factory price, including research. The Senate also approved by a voice vote an amendment authorizing the government to issue regulations requiring that new drugs be tried out on animals before they are used in clinical tests on humans.

Highlights of S. 1552, as passed, provide for the following:

New drugs would have to show "substantial evidence of effectiveness" before they can be placed on the market. Presently FDA is required to approve new drugs only for safety.

Individuals using new drugs and antibiotics for investigational use would have to maintain records and make reports to the Secretary of HEW on their findings.

The Secretary would be given the authority to suspend without hearing a new drug application if he finds that the drug is an imminent hazard to public health.

All individuals manufacturing, processing, or compounding drugs would have to register annually. This does not apply to physicians, pharmacists and researchers.

Factory inspection provisions will be expanded, giving the Federal Government access to all records on research, processing, and sales.

New drug applications would not become effective automatically. The Secretary would have up to 180 days to approve the application or to give notice of hearing, which would take place within 140 days.

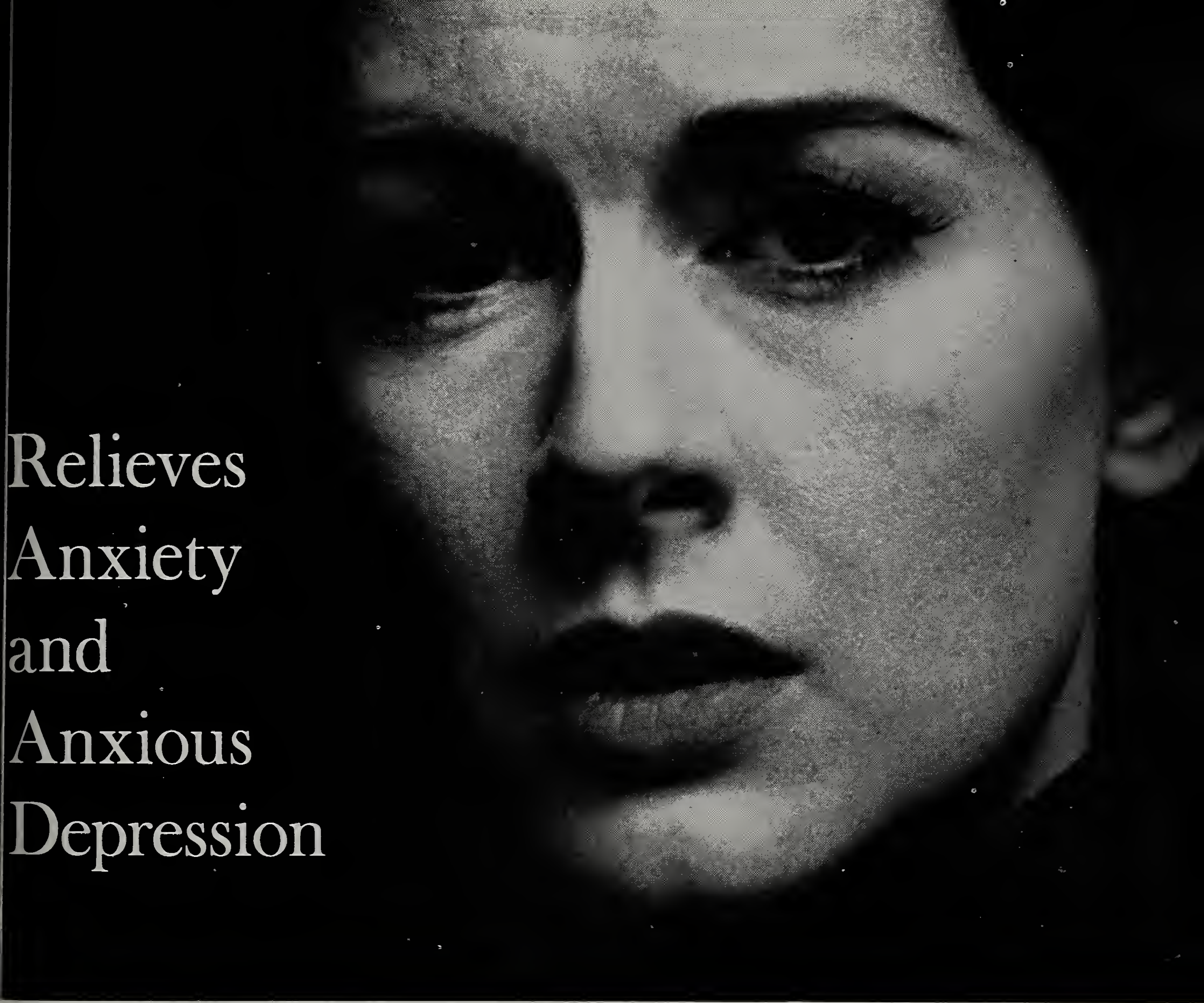
The official name of the drug would have to be at least half as large in print as the brand name on labels. The labeling would have to give the established name and quantity of each active ingredient.

The Secretary of HEW would be given authority to designate the official name of the drug.

Control over drug advertising would be shifted from the Federal Trade Commission to the Food and Drug Administration.

### Administration's Drug Bill

On the same day that the Senate passed S. 1552, the House Commerce Committee completed public hearings on the Administration's version of the drug control bill (H.R. 11581). The hearings on the bill began on August 20. Among those who testified were Eugene N. Beesley, Chairman of the Pharmaceutical Manufacturers Association and President of Eli Lilly and Company; James F. Hoge, General Counsel of the Proprietary Association; Dr. Theodore G. Klumpp, President of Winthrop Laboratories; former U. S. Surgeon General, Dr. Leonard A. Scheele, and Philip Jehle, Washington representative of the National Association of Retail Druggists.



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## BLUE SHIELD PLANS READYING NEW "OVER 65" PROGRAMS

St. Louis and Kansas City Plans are completing medical-surgical coverage programs for Missouri senior citizens, following AMA-National Blue Shield plan, to provide paid-in-full benefits for limited income subscribers.

Development of new medical-surgical programs for Missouri senior citizens has been virtually completed by the St. Louis and Kansas City Blue Shield Plans and details are expected to be circulated to physicians soon.

The new "Over 65" programs, which follow the health care plan outlined earlier this year by the American Medical Association and the National Association of Blue Shield Plans, are designed as part of the medical profession's nationwide effort to combat propaganda for passage of Social Security medical care schemes.

As proposed in the AMA-National Blue Shield plan, both the Kansas City and St. Louis protection programs will provide paid-in-full (service) benefits for individuals over age 65 with limited incomes. Membership dues, while varying between the plans, are expected to be in the neighborhood of $3.50 a month for the individual and less than $7.00 per month for the family.

The proposed programs were approved in principle last March by the MSMA House of Delegates, which requested the two plans to work out specific programs. Since the St. Louis Blue Shield program has heretofore been entirely on an indemnity benefits basis, however, physicians in the St. Louis Plan area will be asked to sign agreements of support for the service benefits feature for the aged before the program is put into effect there.

Benefits of the programs are intended to apply as full payment for senior citizens within the program's income limits—$2,500 for individuals, $4,000 for member and dependents. If the member's income is in excess of these amounts, benefits apply as credits against the physician's fee. Benefits and the income levels for full payment eligibility under the Kansas City program will generally conform to the two top levels of that plan's present Tri-Level program.

No health statement will be required for members enrolling under the program and benefits will be provided for all preexisting conditions after six months of membership. Enrollment will be on a non-group basis and the usual Blue Shield rules relating to continuation of membership for life, conversion privileges and such will apply to the senior citizen program also.

Specific dates for the announcement of the new programs to the public have not been established as yet, but it is hoped that enrollment of members can begin in November or December.

## Federal Trade Commission Moves Against Nonprofit Charitable Organizations in Commercial Blood Bank Matter

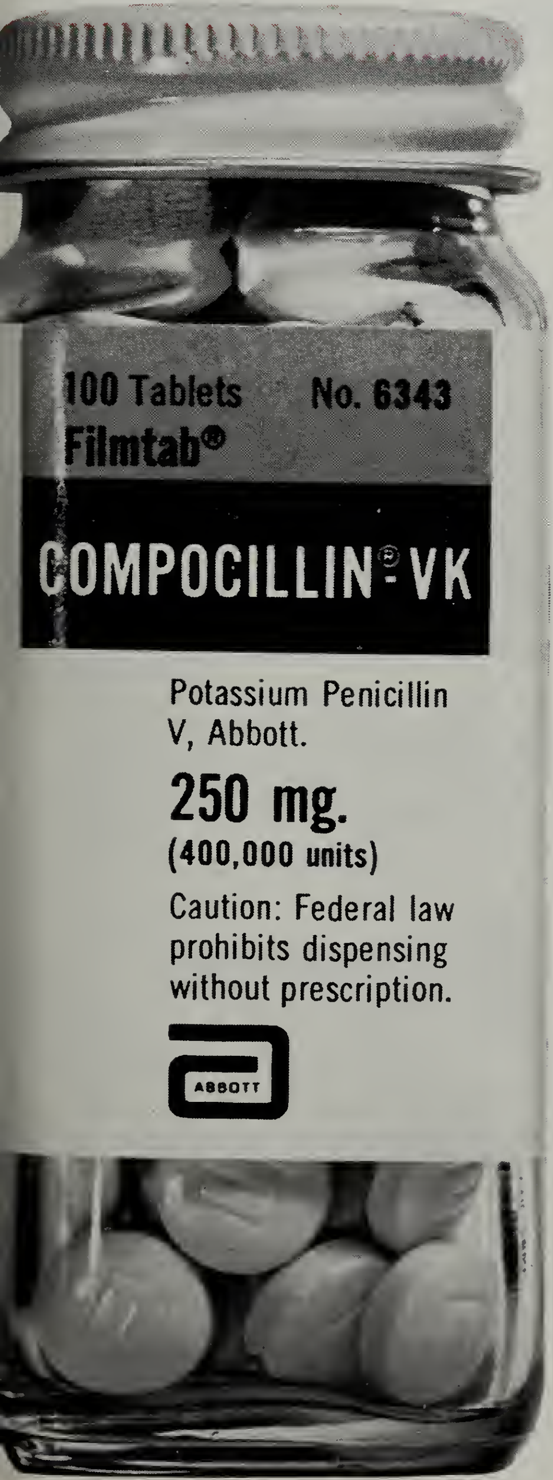
In an unprecedented action, the Federal Trade Commission on July 5, 1962, filed formal complaint against five nonprofit charitable organizations and 50 individuals in the Kansas City area, charging them with illegally hampering and restraining the exchange, sale and distribution of human blood in interstate commerce.

The nonprofit corporations are the Community Blood Bank of the Kansas City Area, the Kansas City Area Hospital Association and three of its member hospitals—the Menorah Medical Center, Providence Hospital and Baptist Memorial Hospital. In naming a Jewish, a Catholic and a Protestant hospital, FTC enjoined in a class action all of the 43 member institutions of the hospital association.

Also named as respondents are the members of the governing boards of the Community Blood Bank and the Area Hospital Association, all of whom serve without pay, and the executive directors of the two organizations. Completing the long list of respondents are 16 pathologists serving the major hospitals in the area and two hospital administrators. An order of Catholic nuns, a Protestant bishop and many prominent community leaders are among those named.

*(Continued on page 1024)*

# PEAK EFFICIENCY WHEN YOU NEED IT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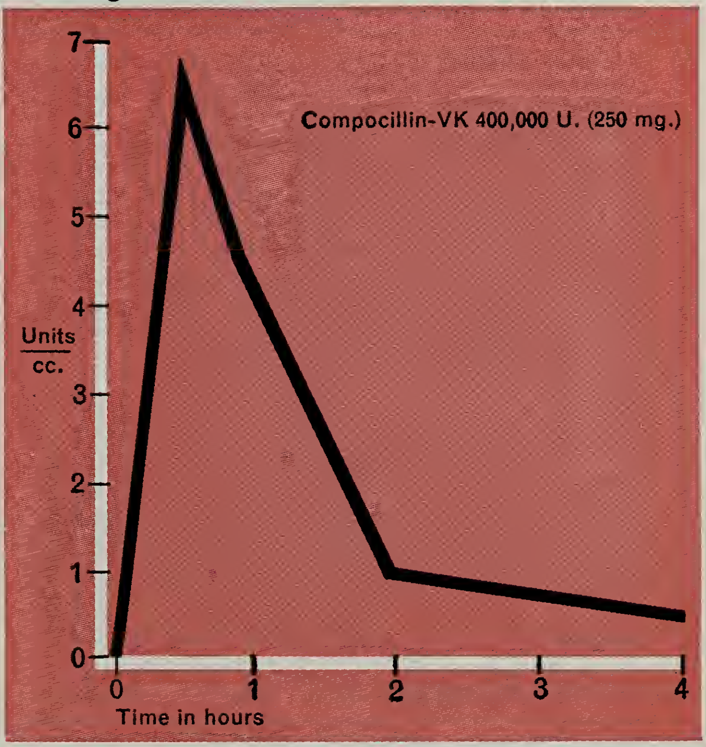

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*Chart data from two separate studies completed by the Microbiologic and Medical Departments of Abbott Laboratories.

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# Missouri Academy of General Practice

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## PROGRAM

### Saturday, November 3, 1962

9.00 a.m. Business Session.

### SYMPOSIUM ON ADOLESCENT MEDICINE

10:00 a.m. Female Isosexual Precocity, Arthur L. Haskins, M.D., Baltimore, Professor and Head of the Department of Obstetrics and Gynecology, University of Maryland School of Medicine.

10:20 a.m. Adolescent Growth and Sex Development, Cyril M. MacBryde, M.D., St. Louis, Associate Professor of Clinical Medicine and Director of the Metabolism and Endocrine Clinics of Washington University School of Medicine.

10:40 a.m. Intermission to View Exhibits.

11:10 a.m. Thyroid Disorders of Adolescence, Daniel L. Sexton, M.D., St. Louis, Associate Professor of Clinical Medicine. St. Louis University School of Medicine.

11:30 a.m. The Anovulatory Adolescent, Arthur L. Haskins, M.D., Baltimore.

11:50 a.m. Panel Discussion on Adolescent Medicine.

12:30 p.m. Lunch and Exhibits.

### SYMPOSIUM ON OFFICE ORTHOPEDIC PROBLEMS

2:00 p.m. The Office Treatment of Common Foot Disorders in the Adult, Emil D. W. Hauser, M.D., Chicago, Associate Professor in the Department of Orthopedics, Northwestern University School of Medicine.

2:20 p.m. Examination of the Rheumatoid Hand—Can Operation Help Improve Function, Arthur H. Stein Jr., M.D., St. Louis, Associate Professor of Orthopedic Surgery, Washington University School of Medicine.

2:40 p.m. Management of the Painful Neck, Charles V. Heck, M.D., Chicago, Clinical Associate Professor of Orthopedic Surgery, University of Illinois School of Medicine.

3:00 p.m. Intermission to View Exhibits.

3:30 p.m. Surgical Management of Office Foot Problems, Carl M. Fellhauer, M.D., St. Louis, Senior Instructor in Orthopedic Surgery, St. Louis University School of Medicine.

3:50 p.m. The Office Treatment of Foot Disorders in Children Including Club Foot, Emil D. W. Hauser, M.D., Chicago.

4:10 p.m. Present Methods of Treatment of Bursitis, Charles V. Heck, M.D., Chicago.

4:30 p.m. Panel Discussion of Office Orthopedic Problems.

### PRESIDENT'S INSTALLATION BANQUET

7:30 p.m. President's Installation Banquet, Mr. James W. Foristel, Washington, D. C., AMA Legislative Representative, Starlight Roof, Hotel Chase.

### Sunday, November 4

### GENERAL SCIENTIFIC SESSION

9:00 a.m. You Should Do Plastic Surgery in Your Office, Charles E. Horton, M.D., Norfolk, Va., Consultant in Plastic Surgery to the U. S. Naval Hospital, U. S. Marine Hospital and Veterans Administration Hospital in Norfolk.

9:20 a.m. Certain Aspects of Urinary Tract Calculus Disease, Ian M. Thompson, M.D., Columbia, Professor and Chairman, Section of Urology, University of Missouri School of Medicine.

9:40 a.m. Space Medicine and the Manned Space Flight Program, Frank B. Voris, Captain M.C., USN, Washington, D. C., Assistant Director, Aerospace Medicine, Office of Manned Space Flight, National Aeronautics and Space Administration.

10:20 a.m. Intermission to View Exhibits.

*(Continued on page 1006)*

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# Woman's Auxiliary

The opportunity will be ours in this colorful month of October to join hands with our coworkers from every Auxiliary in Missouri when we meet together October 17 and 18 at the Mark Twain Hotel in Hannibal for our Annual Fall Executive Board Conference.

Mrs. J. Martyn Schattyn

Traditionally the state president sets up the program with the idea of bringing to her officers, chairmen and county presidents the best and most advanced programs as outlined by the national chairmen. Thus, our Fall Conference has become, in truth, a workshop for county officers. Our various facets of program constantly present challenges to those who desire to make their lives more meaningful. At the Conference we try to stress the job that has to be done, while giving some real concrete examples on how to accomplish it. County presidents and chairmen are urged to ask questions and to outline their problems. Should the solutions elude us at first, at least we will be able to work together to find them. This "hand-in-hand" effort can be a wonderfully satisfying and rewarding experience.

To return to the basic program outline which I stressed last month, let us continue to the Committee on Rural Health. "Joining Hands for Self-Help in Rural Health" is the national theme this year. To help people help themselves has always been the philosophy behind true self-reliance. Our aim is to give assistance to Extension Services, Farm Organizations, Dental Associations, Public Health Associations and others in getting this job done. Many of our smaller auxiliaries are truly rural in nature and can gear their local programs to aid in their own county's problems.

Safety is a big field, and one in which we can never afford to relax our efforts. As an Auxiliary we have attained extensive publicity in connection with our legislative activities. Mrs. Burton E. Kintner of Indiana, Chairman of the National Safety Committee, states that a natural follow-up to this publicity would be to consolidate our gains by becoming equally publicized for our work in fields which illustrate our deep concern for the total health and safety of the community.

A new interest on the national horizon is the Committee on International Health Activities whose program is "Service to a World-Wide Medical Community." This is accomplished by sending to various needy areas throughout the world used medical text books, sample drugs, medical supplies and instruments, x-ray equipment, office furniture and the like. To the donors the gifts may represent merely surplus stocks or outworn and outdated materia medica. Yet, to those who receive them, they are often treasures beyond price. Along this same line, international hospitality is stressed, and auxiliaries which have contacts with foreign students, physicians or their families are in an excellent position to make a wonderful contribution toward a better understanding by the foreign visitor of our country and our way of life.

The committee which our last state convention recommended we form to work with Senior Citizens and to help change for the better their distorted "image" of the physician, has gotten off to a flying start. Mrs. Revis Lewis, our chairman from Kansas City, has sent out an interesting Newsletter brimming with original ideas. This committee is not on the national list so there is no national precedent to follow. However, we feel we are definitely headed in the right direction and hope to see all of our counties appointing local chairmen and finding some area in which to be useful.

Radio, television and films are those indispensable tools of communication which every Auxiliary can and should use to their fullest. This is an important area of public relations, a way of audio-visual education, which can bring alive our message of service.

One of the happier tasks which we have assumed is the celebration and observance of Doctor's Day each year on March 30. This is a special project of the Southern Medical Auxiliary and one which brings joy and pride to all of us as we entertain and applaud those wonderful physi-

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**JOSEPH B. KENDIS, M.D.,** ***St. Louis,*** **Moderator**

# Management of the Alcoholic

## *Symposium*

**This symposium was presented on November 21, 1961, in St. Louis and was made possible by a grant from Roche Laboratories, Division of Hoffman-LaRoche, Inc.**

**Dr. Kendis is Clinical Director, Alcoholism Treatment and Research Center, Malcolm Bliss Mental Health Center, St. Louis.**

Joseph B. Kendis, M.D., St. Louis, Moderator: It is my belief that physicians in general have an incomplete knowledge of alcoholism, and because of this do not have success in treating alcoholic patients. This, in turn, engenders in these physicians a degree of hostility toward alcoholic patients who, as a consequence of this feeling, are gradually pushed out of the treatment picture.

Unfortunately, these individuals are ill as are those suffering from other maladies, and if the physician can gain greater knowledge about the disease and thus proficiency in treating it both physician and patient will gain in the long run. This in turn will benefit also families, employees, employers and friends, and thus the community will, in the long run, be better off.

In an effort to increase the knowledge of the physician about alcoholism as a disease process, a one day symposium was held in St. Louis for physicians of a large surrounding area. The approach was one of multiple disciplines attacking the alcoholism problem, a problem of the community as viewed by the sociologist, as one of the individual as seen by the physician and as one of research as seen by the physiologist.

Experts in each of these various fields presented to the assembled audience their views which have now been assembled herein as a symposium.

**GEORGE A. ULETT, M.D.**, *Jefferson City*

# One Community's Approach to Alcoholism

**The creation of a public alcoholic treatment unit at the Malcolm Bliss Hospital in St. Louis and its work are described.**

**Dr. Ulett is now Acting Director, Division of Mental Diseases of the State of Missouri; Professor of Psychiatry, Washington University School of Medicine; formerly Medical Director of Malcolm Bliss Mental Health Center and Director of Psychiatric Services for the Hospital Division of the City of St. Louis.**

## THE PROBLEM

IN THE ST. LOUIS area there are 40,000 chronic alcoholics, a public health problem of considerable magnitude. The yearly cost to industry and the municipal police, health and welfare services has been estimated as upwards of five million dollars. The cost in human suffering is unmeasurably great. Yet no public facility now exists to offer specialized treatment for these sick individuals of the community. For some years the Malcolm Bliss Mental Health Center, as an acute admitting and short-term psychiatric treatment hospital has admitted to its wards from 500 to 800 alcoholics yearly. Specializing, as it does, in the care of seriously disturbed mentally ill persons, this center has been able to offer, for the most part, only a 12 to 24 hour drying-out service for these alcoholics and, when psychiatric staff members did occasionally offer to give more extended care to an alcoholic, the usual answer from the patient was in essence "Sorry, doc, I don't belong here with all these lunatics." It thus became apparent that if the Malcolm Bliss Mental Health Center was to provide a treatment program for alcoholics and assist the St. Louis community with this grave problem, it would be necessary to establish a specialized treatment program in a separate area of the hospital.

## HOW WE PROCEEDED

Finding no funds available in the City Hospital Division budget to create the needed treatment facility, we at Bliss joined with a number of citizens and a physician long interested in this problem, and formed the Committee for Education on Alcoholism of Greater St. Louis. It was our hope to set up some sort of an information center and to collect funds to establish at Bliss a treatment service. Our movement failed to have appeal for the people of the St. Louis area and so after collecting only $500, mostly from the committee members, we disbanded with considerable discouragement. Two years later the situation was essentially unchanged. At this time the wife of a patient suffering from chronic alcoholism sought to have her husband hospitalized at Bliss Hospital. He, however, recalling his former stay on a ward with psychotic patients, successfully resisted his wife's efforts at hospitalization and then committed suicide. This tragic event was brought to the attention of the public through the efforts of a sympathetic reporter on one of the local papers. In a series of newspaper stories, this reporter told of the community's great need and of the unsuccessful attempts to create a treatment facility at the Malcolm Bliss Mental Health Center. Offers of some monetary support were immediately forthcoming. Local Alcoholics Anonymous groups were contacted and many of their individual members offered to put their shoulders to the wheel. The Mayor appointed a Citizens Committee to help with the fund raising and efforts began anew. The United States Public Health Service, through its Hill-Burton program, granted $47,500 to match a similar amount raised locally in the community. It took seventeen months and many hours of hard work on the part of a great many persons to raise the required funds. It was found that alcoholism is not a subject with the great popular appeal. However, through the generosity of more than 200 individuals and industrial organizations, the goal was achieved in October 1960.

## THE FACILITY

With clearance of the plans and building specifications through the city, federal and state offices, construction got underway in January 1961. As of now (November 1961) the new ward is complete. The equipment is beginning to arrive and it is planned to open this community's first public alcoholic treatment and research service by early January 1962.

This then is the story of our experience in creating a public alcoholic treatment unit. The new facility is planned around a program of group living and group psychotherapy. In this regard we have taken a page from Alcoholics Anonymous whose treatment approach is based upon one alcoholic helping another. A.A. has been the single agency to consistently report a sizeable number of lasting cures with chronic alcoholics. Thus the heart of our ward is a room for psychiatrically oriented group therapy and A.A. meetings. On either end of the ward are large day-rooms for leisure time activities, dining and recreational therapies. Good fellowship around the clock, high caloric nutrition and the ever-present coffee pot are part of the therapeutic milieu of such an alcoholic treatment center. The ward will hold a maximum of 24 men, housed in four bed units. Another area is available for six female patients. The ratio of one female bed for four male beds is adequate in our experience for the ratio of male to female alcoholics found in this community. In addition there are two small isolation rooms for the treatment of acutely ill patients of either sex. The remainder of the unit consists of nurses' station, utility rooms and offices for the professional personnel who will be working with the patients on the unit. Air conditioned, attractively decorated and furnished in a homey, comfortable fashion, this ward, it is felt, is about as far removed as one can get from the traditional "drunk-tank" so typical of American city hospitals. Such an improved facility is, it is felt, essential to the type of program that is envisioned for the rehabilitation of alcoholics.

## Future Plans

The program planned for this unit is intended to present only the first but an important step in the rehabilitation of chronic alcoholic patients. A maximum stay in the unit of three weeks is anticipated. During this time the staff will meet the medical needs of the patient and begin an active program of physical rehabilitation. Social, psychologic and psychiatric evaluation will be conducted and the patient exposed to an educational program that will teach him "what every alcoholic should know about alcoholism." Alcoholics Anonymous groups will meet on the ward and those patients who wish to enter treatment with A.A. will have the opportunity to make contact with representatives of the A.A. group from the part of the city in which they reside. In some instances contacts will be made with other social agencies to which the patient may be referred and in those cases in which it is appropriate, psychotherapy will be begun, to be continued in the outpatient clinic after the patient has been discharged from the hospital.

On the ward itself, a continuing research program will be underway to evaluate the success of the treatment program and to constantly assess new treatment modalities that may be added to the ongoing regimen. At the present time our group is continuing studies under support of the State Health Department in which we are studying the social agencies in our community and their attitude toward the alcoholic. A three year grant has been received from the United States Public Health Service to conduct a sociological study of the methods by which patients in this program will be returned to the community. A grant from the Licensed Beverage Industries will support a study on the personality of the alcoholic, the results of which, it is hoped, will ultimately help to detect the persons who will respond to the A.A. type of program as differentiated from those who will require a different treatment approach. We intend to parallel these studies with a number of physiologic investigations of the alcoholic patient, including his responses to a variety of new drugs. The hospital laboratories are planning to monitor changes in the electroencephalogram as treatment progresses. A third, and essential part of the program is the education of persons of several professions which should be vitally concerned with the care and treatment of the alcoholic. Psychiatrists and other doctors-in-training, student nurses, student social workers and psychology interns, will all work on a rotation basis through this unit and learn through conferences and active participation in the treatment program how their professions can enter into the care of, and assist with, the rehabilitation process for alcoholic patients. As the unit's program progresses, it is hoped to invite public health nurses, doctors and other interested persons from other parts of the state to come and learn from our progress and our mistakes whatever may be of assistance to them in the treatment of alcoholics in their own communities.

DAVID J. PITTMAN, Ph.D., *St. Louis*

# The Alcoholic, the Physician, the Family and the Community

ALCOHOLISM, one of the major public health problems in the United States, has in the last decade attracted increasing attention from both researchers and clinicians. Researchers not only in medicine but in the social sciences have begun to grapple systematically with questions concerning the etiology of the disorder. Clinicians are increasingly seeing patients with a drinking problem, long before that problem has manifested itself in delirium tremens, liver cirrhosis or malnutrition.

**Alcoholism is described as a disease and is discussed from the standpoints of the alcoholic, the physician, the family and the community.**

**Dr. Pittman is Program Director, Alcoholism Treatment and Research Center, Malcolm Bliss Mental Health Center, St. Louis.**

In the fight against alcoholism, greater emphasis by public health officials and educational organizations has been placed on the role which the general medical practitioner can play in the treatment of the alcoholic and his family. The general practitioner is frequently the first member of the medical community to have professional contact with the individual who is evidencing a drinking problem. Because of his unique role as the family physician in this era of medical specialization, he usually has an intimate knowledge of the total family situation and is able to work with the patient's total life instead of a fragmented part. Furthermore, because of his first obtaining information on the patient's drinking problem, the general practitioner is in a special position to recommend referral sources, both medical and nonmedical, to the patient and his family when it is indicated.

My major purpose here is to provide further information in this important work with the alcoholic during the prodromal phase. Certain findings about alcoholism, the impact of alcoholism on the family and the role of the community in alcoholism control are of relevance to the physician in his clinical work.

## THE DISEASE CONCEPT OF ALCOHOLISM

The disease concept of alcoholism is relatively recent in origin and has not yet been fully accepted by all medical practitioners. Alcoholism, however, is defined as a disease by the American Medical Association. They state in reference to the question, "What are the grounds for considering alcoholism as a medical illness?" the following:

"A disease is defined as: 'any deviation from a state of health . . . more specifically, a definite marked process having a characteristic train of symptoms. It may affect the whole body or any of its parts, and its etiology, pathology and prognosis may be known or unknown.' . . . Alcoholism does denote a condition in which there is deviation from a state of health. . . . The controversy as to whether alcoholism is or is not a disease is related to the voluntary aspects of the condition in a manner similar to narcotics addicts. . . . Simply because there is a moral and social aspect to this disease does not give physicians the right to deny its existence as a disease."[1]

Despite this official acceptance that alcoholism is a disease, there has been great difficulty in advancing an operational definition which is all inclusive and acceptable for alcoholism. For example:

"This lack of consensus regarding definition is dramatically illustrated in a current study (Pittman and Sterne[2]) which is investigating social agency and health experts' conceptions of the alcoholic, his disease and its etiology. Three major themes are used by these experts in their definitions. They view the alcoholic in terms of: the consequences of drinking for himself or for others—that is, the social, economic and physical effects of indulgence in alcoholic beverages; the nature of his drinking behavior—that is, characterizations of frequency, time of day, presence of companions, and amount ingested; and his response to alcohol, that is, the physiologic and psychologic reactions to the ingestion of alcoholic beverages."[3]

All three themes—consequences of drinking, drinking behavior and response to alcohol—have been used singularly or simultaneously to indicate that the patient has a drinking problem. It it always wise to examine the second—drinking behavior—in terms of the cultural context within which it occurs.

It is perhaps sufficient to state that at this stage of research that the patient is considered as an alcoholic if he meets the criteria set forth by the Expert Committee on Alcoholism of the World Health Organization. This definition is:

"Alcoholics are those excessive drinkers whose dependence upon alcohol has attained such a degree that it results in noticeable mental disturbance, or in an interference with their bodily and mental health, their interpersonal relations, their smooth social and economic functioning or those who show the prodromal signs of such developments."[4]

Thus, using this broad definition one does not run the danger of telling a patient he is not an alcoholic (when his drinking has seriously interfered with his social and economic functioning) because we cannot exactly determine whether he is addicted or not to alcohol.

### Alcoholism and the Family[5]

Alcoholism, like any other culturally disapproved form of behavior, necessitates adaptations in the behavior of family members. Earlier 20th Century conceptions tended to view the members of the alcoholic's family as completely innocent victims of the member's alcoholism. Today researchers posit a more dynamic view indicating that a family member's alcoholism is influenced by the relationships within the family as well as the alcoholic influencing the interaction in the family.

Joan Jackson, a sociologist at the University of Washington School of Medicine in Seattle, has perhaps done more research on the interrelationship of alcoholism and family interaction than any other scholar. Jackson has been particularly concerned with the reaction of the family to the development of alcoholism in the father and husband, and the stages through which the family moves in its adjustment to alcoholism. These stages are as follows:[6]

(1) "Attempts to deny the problem." Since in the prodromal phase, the deviant drinking episodes may be widely separated, denial of alcoholism will be based on its infrequency.

(2) "Attempts to eliminate the problem." Familiar technics are used from hiding bottles to drinking with the family members. The wife frequently feels that all will be all right as long as the husband drinks with her. Threats of marital separation become common.

(3) "Disorganization." The family structure temporarily collapses and the wife takes the attitude of "what's the use."

(4) "Attempts to reorganize in spite of the problem." The wife begins to assume many functions of the alcoholic husband.

(5) "Efforts to escape the problem." Marital separation and divorce frequently occur or geographic movement (escape) takes place.

(6) "Reorganization of part of the family." This may end here if divorce occurs or may move to the last stage.

(7) "Recovery and reorganization of the whole family." Husband achieves sobriety again; this necessitates opening the family for reincorporation of the father. A family unused to a functioning father may find this extremely difficult.

It is because of a lack of basic understanding of these sequences through which the family moves in its adjustment to alcoholism that has led many observers, especially psychoanalysts, astray. The frequently noted characteristics of masculinity and dominance in the wives of alcoholics is perhaps due more to the wives' having had to assume the breadwinner role in their families than to basic personality characteristics. The same factor is involved in the frequently confused sexual identities which alcoholics and their wives present to the clinicians. Thus, the similarities in the personality characteristics of the wives of alcoholics is a consequent of their adaptation to alcoholism in their husbands.

These observations, however, should not deter one from realizing that the family members' personalities affect and are affected by the course of the spouse's alcoholism. Alcoholism may be one patterned reaction to marital disharmony, involving a partial escape from a marriage which is no longer satisfying. Treatment of the spouse's alcoholism involves in these cases the working with the total family unit. In fact, some clinicians have found that the nonalcoholic spouse may be "sicker" than the alcoholic spouse.

### Alcoholism and the Community

As a disease alcoholism affects not only individuals but the communities in which alcoholics reside. In the last two decades, a number of community resources have developed which aid not only the alcoholic patient but provide basic information about alcoholism and alcohol related problems. These resources serve as valuable additions to the skills which the medical practitioner can bring to bear on the alcoholic patient's situation.

One of the most valuable resources is that of Alcoholics Anonymous, founded by a physician and a stock broker in the late 1930's, which uses nonconventional methods to help the alcoholics to help themselves. This group's history and success which have been recited so many times in the mass media need not be recounted here. One should point out, however, that A.A. counts among its successful members certain individuals who had failed to achieve sobriety despite the medical and psychiatric skill which had been utilized in their care.

The medical practitioner should be aware that there are other nonmedical resources available in the community—namely, the large number of social agencies. In the hospital context, medical and psychiatric social workers are available to work with the patient and his family. In St. Louis, in a current study being conducted by D. Pittman and M. Sterne, we have identified at least ten agencies which have alcoholism as a major concern of their activities. These range all the way from the service centers for Skid Row alcoholics to counseling centers for upper-middle class families with problems.

The community needs furthermore to mount other programs of alcoholism control, prevention and education. Orientation should always be: "It is better to prevent than to salvage and repair."

## SUMMARY

In summary, the general practitioner should remember that similar to the policeman on the beat who can influence the future attitudes of a juvenile delinquent, the physician must be prepared to properly advise his alcoholic patients at the crucial point of first therapeutic contact. The physician must avoid two extremes in working with alcoholics. One extreme is the clinician who works intensively with the patient, becomes over-identified with the alcoholic and when an alcoholic relapse occurs, the physician feels that he has failed personally. On the other hand, the practitioner must avoid the rejection of the alcoholic as a patient on the grounds that he does not pay his bills, that he is a moral weakling who is not motivated to stop drinking or that he, the alcoholic, has a poor prognosis. One should remember that alcoholism is a chronic disease and, as with any chronic disease, one expects some patients to relapse and should not place the locus of the blame on the patient but in the dynamics of the illness itself.

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**JACKSON A. SMITH, M.D.,** ***Chicago***

# Difficulties in Managing the Alcoholic

**The difficulty of the patient to admit that he is an alcoholic and the management of the patient, either the admittedly alcoholic or unadmitted, are discussed.**

**Dr. Smith is Clinical Director of the Illinois State Psychiatric Institute, Chicago.**

As in the management of any other type of patient, it is necessary that the alcoholic be concerned over his illness and agree with the diagnosis if much is to be accomplished with treatment. If the patient denies that he is an alcoholic, and that he has lost control over his drinking, he will see little reason to abstain more than temporarily.

Alcoholics are more willing to view themselves as heavy social drinkers, which implies that they may occasionally drink too much but that there is no need to give up alcohol entirely. The patient may attempt to disprove he is an alcoholic by saying he "never drinks in the morning," or that he "never drinks alone." Others claim they only have "a couple before dinner," or that they "can take it or leave it alone." Most often, they take it.

It must be appreciated that the patient is attempting to preserve his self-esteem by denying his dependence on alcohol. Because if he admits he is an alcoholic, there is an implied need for treatment, and the term means he is unable to control his drinking.

Other patients may dismiss the need for treatment by admitting they are alcoholic, and since they do not intend to drink anymore, there is no need to see a physician. There is nothing wrong with the patient's conclusion unless he has been making this same statement with equal certainty for most of his drinking career.

Most alcoholics are continuously planning to "cut down" on the amount they drink. They may utilize such obvious subterfuges as buying only a half pint of whiskey at a time or drinking only beer, in an effort to prove they have retained some control over their intake. These efforts at self-deception are attempts to disprove the obvious.

The alcoholic possibly varies from the social drinker in several particulars: He drinks more and he drinks for different reasons. Too, his drinking severely damages his marital and occupational relationships.

The social drinker, as the term indicates, most often drinks to socialize. A couple of drinks decreases his self awareness, increases his self confidence and makes him less inhibited. He may have a couple before dinner to relax and to improve his appetite, but he has no need for a fifth after dinner.

On the other hand the alcoholic drinks more and either lacks or quickly loses concern over the consequences of his excess. His drinking is more often terminated by oblivion than a meal. Instead of improving his ability to socialize, his drinking may prevent it; because he becomes to stuporous to respond.

In view of the efforts the patient makes to deny his diagnosis, it may be anticipated that he may not readily agree with his physician's impression. The word alcoholic is as much a lay as a professional term. At best, it implies irresponsible and unreliable behavior in a sick human. It may also imply disregard for responsibility, for family and for society. To many people, the term may connote a "Skid Row" derelict which is synonymous with total failure, a "bum." In any event it is not a desirable title.

Although alcoholic is a polite sounding word, it also means a "drunk" or a "lush" which the patient refuses to apply to himself. The public presumes the illness is self-inflicted and acquired in a pleasant way.

This reluctance to accept the diagnosis is evident in the patient who has a severe episode of delirium tremens but responds to the suggestion that he attend a meeting of Alcoholics Anonymous by saying he "doesn't want anything to do with a bunch of drunks." It should be noted that the members of Alcoholics Anonymous have become associated with two favorable views in the public's mind: first, they are making a sincere effort to maintain sobriety; and second, they are helping others with similar problems.

In fact an active member of Alcoholics Anonymous may no longer be considered an alcoholic but an "A.A." And it is encouraging that the stigma which may be associated with the alcoholic is not applied with the same vigor to an "A.A.," rather he is more admired for his recovery than damned for his illness.

As long as the patient denies the diagnosis he has little internal reason to abstain. His sobriety may be merely a temporary effort to placate those injured or offended by his drinking. He may seek and accept treatment because his wife threatens to divorce him, or because his employer threatens to fire him.

It is logical to consider what treatment means to the alcoholic. To most patients medical treatment implies symptomatic relief or, ideally, a cure. To the alcoholic it is more likely to be viewed as a deprivation, in which he has to forego a substance which has become essential to his way of life.

The importance of alcohol to such patients is evident in their frequent willingness to give up family, friends and job before seriously considering giving up drinking. This degree of reluctance to relinquish alcohol is not explainable on the basis of its taste, the brief euphoria it produces or even the oblivion which it offers. This reluctance to accept sobriety is more understandable if the importance of alcohol to these other relationships is emphasized.

If it is agreed that alcoholism is a chronic illness which requires years to become manifest, then the successes as well as the failures during this prolonged period of increasing disability may both have occurred as a part of the illness.

For instance an alcoholic's superficially compatible marriage may have been prolonged because of his illness. His wife may supply the alcohol and may derive some reassurance from the patient's dependence on her. He may have had an excellent position or an inheritance when she married him which he subsequently lost as a result of his irresponsible behavior or poor judgment. But the wife may feel herself somehow at fault for his failure, or she may be reluctant to desert him after years of misfortune.

As an example, such a couple married during college. The boy's family was most pleased because they felt the responsibility of marriage would "settle him down." His wife also felt she could change him. The patient was a moody, impulsive and irresponsible young man. He was socially quite popular except that he occasionally became stuporously drunk or belligerent at fraternity parties.

During his freshman year his grades had been good, in his second and third year they were only average, and during his senior year his attendance at class was so irregular that he dropped out of school during the second semester. At the age of 21, he returned to his home town and entered his father's business. His performance was erratic and he was frequently absent from work. During the next few years on several occasions he embarrassed or threatened his wife publicly.

When he was 29, he agreed to accept medical treatment after his arrest for drunken driving. His motivation was rather obviously to avoid or to ameliorate the charge with which he was faced. His family paid his fine and he received a suspended sentence. He saw his physician twice and did not return after his trial.

The patient's first episode of delerium tremens occurred when he was 31. When he was 36, he was committed to a state hospital. By the time he was committed, his family had refused to have any contact with him. However, they continued to help his wife financially and to contribute to the support of the two children.

During the years of his increasingly destructive drinking, his wife continued to hope he would eventually change. Both her own parents and her husband's parents repeatedly pleaded with her to divorce the patient. This she would not do. She erroneously felt she had in some way failed her husband and was in part responsible for his drinking. This attitude was maintained in spite of the verbal and physical abuse to which he frequently subjected her while drinking.

This case points up a familiar difficulty in treating the alcoholic. The wife, the parents, their friends all saw the need for treatment which the patient refused to admit. They made a great effort to persuade him to seek help, but until he was committed nothing could be done medically. This is a frequent story.

Most alcoholics evolve a pattern of sobriety, which makes their behavior somewhat predictable. For instance, some may average only two of three alcoholic bouts a year. Others may drink rather continuously until they become too ill physically to tolerate alcohol and require hospitalization.

Medical treatment may be divided into two phases: restoring the patient to a physiologically normal state following a bout, and helping the patient maintain sobriety once it has been established. During the past three decades, there has been marked improvement in the first phase, i.e., the treatment of the complications of a prolonged excessive intake of alcohol. But the progress in helping the patient remain abstinent after he recovers, has been much more modest.

The following suggestions are offered for the management of the sober alcoholic. If he has been hospitalized, he must first be carefully evaluated to establish that he has recovered from the effects of his most recent bout before discharge is considered. Usually as soon as the alcoholic recovers from the acute effects of a drinking episode, he offers endless reasons for leaving the hospital.

These protests over being hospitalized are best met by the physician's telling the patient that he will not discuss his being discharged until he has been in the hospital a week. The doctor may also remind the patient that his previous efforts at self treatment have not been successful. Alcoholics are charming, persuasive and persistent after a bout. The physician must firmly establish that he is in charge of the case; otherwise all of his time will be spent explaining the reasons for his decisions to the patient.

While the patient is in the hospital his drinking history should be gone over in detail. An effort should be made to clarify the reasons the patient offers himself for resuming drinking after a period of abstinence. Usually his reasons will be vague and indefinite, or he may simply say he does not know why he drinks.

The alcoholic's tendency to follow a pattern during his sober interval should be gone over on several occasions. It should be stressed that after each bout he is equally certain that he will not drink again; but as his general health improves and the consequences of his drunken behavior are overcome, he is likely to fall back into his usual pattern and start drinking.

The need for total abstinence is unequivocally stated as rapidly as the patient can tolerate the idea. The forcefulness with which this is stressed depends on the clinician's judgment. For instance, the prospect of living all their days without alcohol is overwhelming to some patients who are dependent on alcohol. With such a patient, the physician does not temporize with the need for total abstinence, he only delays discussing the subject until the patient is sufficiently well to accept the idea.

It is beneficial to explain to the patient what an alcoholic is. If the patient is to improve, he must accept the idea that he is an alcoholic. Being an alcoholic gives the patient a particular type of identity. He has to think like an alcoholic. He cannot regard himself as a "social drinker," a "heavy drinker" or even a "problem drinker" unless all these terms mean that it is unquestionably impossible for him to take one drink. He must accept the idea he will either be sober or in the process of getting drunk.

Most patients are helped in accepting the idea they are an alcoholic by attending meetings of Alcoholics Anonymous. It may also be pointed out to the patient that only an alcoholic is really disturbed by the prospect of giving up alcohol when it is obviously causing him trouble. The social drinker may dislike the idea; but if his drinking causes him trouble, he will accept the fact and modify his drinking accordingly—if he does not, he is an alcoholic.

Once the alcoholic history has been taken, there is no need to repeat it each time the patient is seen. During subsequent visits the emphasis is better placed on reinforcing the patient's conviction that he is an alcoholic. For instance it may be pointed out that when he is angered, slighted or unfairly treated, instead of expressing his anger, he is likely to conceal his feelings and use these events as excuses for drinking.

Finally, in the management of the alcoholic it must be remembered that this is a chronic illness and the patient's behavior has become habitual. Treatment should have as its goal the changing of one particular aspect of his behavior, his drinking. Any other excesses the patient has should be tolerated, it is sufficient for the physician to restrict his efforts to the patient's most threatening problem, alcoholism.

In other words, the patient may smoke too much, eat too much or work too much, but these other forms of intemperance are better accepted since they are less harmful. There is no need to try to alter all the patient's tendencies, habits and responses. It is quite sufficient to arrest his alcoholism. The physician should avoid unconsciously taking himself as a model, after which he attempts to fashion the patient.

The patient may require some less toxic substance to help control his anxiety. The short and medium acting barbiturates are contraindicated because of their habituating tendencies. The amphetamines are contraindicated for similar reasons.

The skeletal muscle relaxants and the phenothiazine derivatives are well tolerated and may be safely prescribed for prolonged periods. According to recent reports chlordiazepoxide (Librium) meets most of the criteria for a drug suitable for administration to these patients.

It must be appreciated that it takes years for alcoholism to develop in most patients, and it may be anticipated that several months will be required to alter such a chronic illness. If the patient "slips" once or twice while changing his entire pattern of life, the failure is better attributed to the treatment than the patient.

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# A Comprehensive Approach to the Rehabilitation of Alcoholics

**Methods used by the Division of Alcohol Studies and Rehabilitation of the State Health Department of Virginia in treatment and rehabilitation of alcoholics are described.**

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There is a growing emphasis in the medical press on the opportunities and responsibilities of private physicians in the care of alcoholics and their families. This is commendable because it bespeaks a concern of the medical profession for all ill people and a recognition that alcoholics can be helped. General physicians and specialists in the various medical disciplines are asking themselves just how and with which patients they can do most useful therapeutic work. This paper is written primarily for the general physician and the nonpsychiatric specialist who is motivated to rehabilitate these patients and their families as fully as possible. Experiences with therapy in the Division of Alcohol Studies and Rehabilitation of the State Health Department of Virginia will be used by way of illustrations.

The initial problem in the care of the alcoholic is to bring the patient to therapy and help him to continue in a program of rehabilitation. This is usually fraught with difficulty, partly because alcoholism overtakes its victim subtly and often imperceptibly. Without understanding how, the alcoholic may find himself involved in the symptoms of uncontrolled, harmful alcohol use. It is not surprising, therefore, that he frequently resorts to rationalizations and denial of the reality of his problems. Even when denial is no longer possible, he may misinterpret his symptoms and misconceive his course of action. He may seek to control alcohol intake by enforcement of self-discipline and may use help from others only for recovery from the pangs of a drinking binge. At such a stage, the alcoholic does not really want to stop drinking because, whether he recognizes it or not, alcohol has become for him a necessity without which he cannot function unless his life changes drastically. Alcohol helps him escape from his own sense of isolation and defeat; it pulls him together when he is in a state of panic, and it even invites him to withdraw to his own world of fantasy where he can be, for the time being at least, protected from the pain of living in a world that was not created solely for him. The alcoholic's trouble is that while alcohol acts as a psychopharmacologic agent (albeit a defective one), it also becomes a poisonous substance in its own right. The biochemical basis for its peculiarly pathologic effects on the alcoholic is not properly understood.

As the alcoholic's drinking problem becomes more sharply focused, he finds himself pressed by family, friends and circumstances to abandon his drinking, but is appalled by the prospect of an existence without alcohol since he is aware of no other technic of dealing with his life. Years and years without the chemical comfort of alcohol present an intolerable future. He cannot live with alcohol or without it. At their wit's end, his harassed family propose what seems reasonable to them, namely, that by the use of willpower he ought to be able to abstain from something that is so clearly destructive. The alcoholic himself, while perhaps more than anyone else aware of what he is doing to harm himself and those close to him, finds his friends' suggestions empty, unhelpful and excessively critical. He may react by feeling hurt, angry or guilty. He may even accept the idea that his drinking is a weakness, a bad habit which can be controlled through disciplined exercise of will. He may try hard, only to fail repeatedly. The effort to overcome a weakness by mobilizing strength of will does not succeed.

To the alcoholic who eventually recovers, something quite remarkable happens from which he may forever after date all the events and circumstances of his life. The experience is called "hitting bottom" and this expression has now become a quite well-defined technical term. Hitting bottom is variously experienced by different patients, but for all it is a serious crisis which brings the alcoholic up short and reveals to him a future with nothing but despair and hopelessness. This has been well described by Tiebout,[1] who sees it as a recognition by the patient that his life has failed and that he can look forward to nothing but pain and misery. At this point the patient cries out for help. The necessity to hit bottom as a prelude to recovery now finds rather general acceptance, but as Tiebout has said, the idea of allowing the person to suffer until he cried for help found little sanction psychiatrically in the 1930's. The psychiatrist was conceived as the giver of love and support even though that support, in Tiebout's words, "carried the patient upright to his grave." The patient who hits bottom admits his own powerlessness and decides to turn his life and will over to a power greater than himself. This new idea demonstrated its soundness within the fellowship of Alcoholics Anonymous and now the experience can be formulated something like this: The patient sees the actual condition of his life clearly; he hits bottom and surrenders. This is likened by Tiebout to a conversion. There is no appeal to "will-power."

Not enough is yet known as to how the physician or others can help a patient reach this stage of hitting bottom, surrender and conversion. However, the physician can be of help by his honesty with the patient, by refusing to condemn or to permit the patient to manipulate him and so prolong the pathologic situation. It has been said that an alcoholic may hit bottom during a particularly desperate alcoholic episode or the period of withdrawal thereafter. Many alcoholics do date their recovery from some catastrophic binge. Unfortunately, an alcoholic may seek help to dry out without recognizing the need for anything more. Moreover, an acute period of suffering after the binge is usually followed by a phase of "false cure" during which the patient feels that he will never drink again and that he needs no further help. It is as if all problems had melted away.

In describing the phenomenon of hitting bottom, Tiebout has stated that a conversion occurs when the individual hits bottom, surrenders and thereby his ego is reduced. This is the "big ego" which is a manifestation of the original ego of the infant and which Tiebout describes as a narcissistic remnant, a carry-over from the infantile state, and which Freud[2] would have called an unmodified portion of the original psyche. Tiebout states that the salvation of the alcoholic patient lies in his keeping that ego reduced, in staying humble. As Tiebout says, the surrender is seldom permanent and the motivation arising from the experience of crisis is erased as the patient senses his early improvement. In Tiebout's terms, what is happening to the patient during the "false cure" is that the infantile ego is reasserting itself once more. The battle of therapy is joined at this point and the successful patient is the one in whom the forces which seek help win out. For this reason, the therapy of the alcoholic, to be successful, must be planned and continuing. Episodic, intermittent treatment based only on carrying the patient through drinking sprees cannot but fail. Alcoholic patients are often unwanted patients in hospitals and doctors' offices partly because the emphasis in treatment has too often been simply upon symptomatic relief. As long as help for the alcoholic is limited to periodic management of his acute alcoholism, whether in the hospital, in the office or through home visits, with no on-going rehabilitation program, it is unlikely that much progress will be made.

There are other crises besides the acute alcoholic one through which the patient may be helped to enter effective therapy. Family members, the physician and the patient himself can learn to recognize attacks of nervousness, irritability, depression, panic and other signs that may foretell a drinking spree and for which a patient may seek help.

The alcoholic is a sick person, usually living in a family setting which is also disordered. Some members of the family may actually be more sick than the alcoholic himself either because of or from causes prior to the patient's alcoholism. The patient's progress in recovery may also create new disturbances in the family because of necessary changes in family interpersonal relationships. For example, a recovering, maturing alcoholic may not be an acceptable partner to a spouse with a need to dominate and control. It is important that family members understand as well as possible the nature of the patient's illness and their own problems so that there may be created an environment within the family that is therapeutic to all.

The Division of Alcohol Studies and Rehabilitation of the Virginia Department of Health was established by an act of the Virginia General Assembly[3] in 1948 and is the first such agency to be set up within a state health department in coordination with a teaching medical center. This Division offers opportunity to residents of the state to apply for treatment as early as possible in the course of their illness. The Division operates nine outpatient clinics, scattered throughout the state in centers of population density. An alcoholic or a person who believes he may have an alcohol problem, or a relative can discuss problems with a clinic physician who may recommend that the patient be treated as an outpatient in the clinic or referred for a period of hospitalization in the hospital facilities of the Division in one of the two state medical schools. Hospitalization, at present, usually lasts about seven days but may be longer. The principal objectives of the hospitalization phase are to make a careful medical, psychologic and sociologic diagnosis and to initiate a plan of long-term therapy which is carried out with one of the clinic physicians in the outpatient clinic nearest the patient's home.

At least 30 per cent of the referrals to the clinics of the Division are made by private physicians and these doctors are sent diagnostic reports, treatment recommendations and evaluation of prognosis. The Division, with its hospital facilities and outpatient clinics, hopes to provide a resource to private physicians. Usually a comprehensive plan of therapy evolves in which a team is established consisting of several or all of the following: the physician of the clinic, the social worker, the patient's private physician, the clergyman, the employer and significant family members. With this team, the patient works on a voluntary basis. The therapeutic team, together with the patient, mobilizes necessary resources in the community. Close relations are maintained with Alcoholics Anonymous and the patient is encouraged to seek and find the corporate strength within this body.

### Bringing the Patient and His Family to Therapy

Patients are referred to the Division of Alcohol Studies and Rehabilitation in the State of Virginia on a voluntary basis. No patient is committed. It is recognized that there are degrees of "voluntariness" and that an alcoholic patient is not likely to present himself for rehabilitative therapy unless he is driven to do so by an inescapable crisis. All presenting patients give histories of progressively increasing difficulties related to uncontrolled drinking, usually for many years, and most applicants for treatment have previously been in private sanatoriums, state hospitals or under private physicians. Many have been drinking heavily within a day of admission but most patients are mentally competent to make decisions about entry into therapy. In most of the clinics, treatment begins (as stated) with a phase of hospitalization, but in other clinics the clinic physicians prefer to treat the patients as outpatients for several weeks before considering hospitalization as a necessity if outpatient care alone is not successful. In the Virginia Division, 31.1 per cent of the patients are referred by private physicians, 23.1 per cent by courts, social agencies, clergymen and Alcoholics Anonymous and 35.8 per cent by family, friends or others. Ten per cent are self-referred. About 90 per cent of those who apply are accepted for treatment by the Division and the rest are referred to other agencies. The social worker as well as the physician takes part in the initial task of helping the patient to accept and enter therapy. The social worker may see both patient and spouse or other relative and may continue to see the patient for many visits. Often there are acute family difficulties requiring early attention by the physician and social worker.

### The Phase of Hospital Care

In the Virginia Division, the inpatient phase of treatment, as has been said, is usually brief, patients remaining in the hospital usually not much longer than seven days. The purpose of such hospitalization as a part of a total program of rehabilitation is to carry out a comprehensive diagnostic study and to make a pertinent social and domestic appraisal of the patient and his family. These studies are conducted within a controlled hospital environment that is suitably supportive and permits the patient to work out, with his therapeutic team, an individualized plan of long-term follow-up in the outpatient clinic, utilizing the community resources available and helpful to him. Hospital care for the alcoholic is sometimes more prolonged and in some voluntary state programs, patients remain routinely in hospital about a month. Whatever the length of hospitalization and the stated purposes, which vary, it is clear that hospitalization alone cannot do more than initiate rehabilitative therapy.

Whether for a short or long stay, the hospitalized patient ideally finds himself within a carefully planned therapeutic milieu in which he may examine and explore his psychologic and situational problems and begin to form wholesome relationships and experiment with a new way of life. Many alcoholic patients on admission are depressed, lonely and beset with a sense of hopelessness and emptiness. Some patients present with such symptoms without having had anything to drink for several days or weeks. A few patients are alcoholics who have not taken a drink for many months or a year or more. These patients often have situational difficulties connected with their work together with psychosomatic or specific psychologic problems. Some of these patients who have been previously hospitalized are allowed to spend several days in the hospital, participating in group living by day, and going to their own homes at night.

Ossman[4] has compiled a simplified check list constituting a profile of striking symptoms in alcoholic patients admitted to the inpatient service in the Medical College of Virginia Hospital, Richmond. She has defined a category of character symptoms in patients who are emotionally immature or fixed at the infantile levels of personality or character development. Many such patients show little or no guilt and little or no sense of responsibility for personal choices. Many of these are not practical in making plans for themselves and often they seek immediate satisfactions and characteristically avoid painful situations. Among those presenting character symptoms are helpless, dependent patients who are frightened and lonely; self-entrenched patients who seem to depend only on themselves and to have withdrawn; detached persons who seem no longer to care and have given up and are or seem to be indifferent; and, finally, power-driven patients who seem to seek security through evidence of forcefulness, strength and success. The latter patients seem often unable to acknowledge their need of help and may be actually dependent and like the self-entrenched person except that they have found an uneasy solution in their own omnipotence. Ossman has also defined categories of neurotic symptoms, psychosomatic symptoms and finally, psychotic manifestations. Attempts are being made to correlate these and other diagnostic categorizations with treatment success. The management of the patient with a significant alcohol blood level or in the withdrawal state has been referred to in recent papers[5, 6] outlining the practices of the Virginia Division. Patients hospitalized following or during an alcoholic episode are withdrawn from alcohol at once and alcohol is never given therapeutically. The use of paraldehyde is also obsolete in the modern care of alcoholic patients. When administered to a patient already heavily alcoholized, paraldehyde is not without danger and recent experimental studies have demonstrated that alcohol is neurophysiologically defective as a protector against the effects of stress on brain autonomic mechanisms.[7] Thus, alcohol does not fulfill some of the requirements of a good tranquilizer. Moreover, the use of alcohol as a drug in treatment of withdrawal is psychologically contraindicated. Kalant[8] has recently indicated that alcohol acts primarily at the level of the reticular formation, resulting in a depression of the reticular activating system with release of the cerebral cortex from selective control and inhibition. Alcohol may, therefore, act to cut off from the higher levels of the nervous system an important barrage of afferent stimulation with the psychologic result of permitting the narcissistic, omnipotent infantile ego to take over. Since this primary ego is rigid and unchanging, the alcohol experience is one from which the individual cannot learn and he cannot, therefore, grow or benefit from it.

Acutely alcoholized patients or those in alcohol withdrawal usually require rehydration orally and/or parenterally, and whenever possible, rehydration is accomplished by administration of fluids by mouth. Adequate nutrition must be supplied and, in practice, it is desirable that in addition to regular meals, patients have free access to a refrigerator well-stocked with fruit juices, tomato juice and nourishing foods including meat and fruits. Usually, patients are ambulatory by the second day of hospitalization through judicious use of pharmacologic adjuncts such as chlordiazepoxide (Librium), chlorpromazine, promazine, trifluopromazine and sedatives such as chloral hydrate. Meprobamate and mephenesin as well as other psychopharmacologic adjuncts are used as indicated. Glutethimide (Doriden) may also be given for insomnia as an alternative to chloral hydrate. Vitamin deficiency states are not uncommon in chronic alcoholics although they are less frequently seen now than a generation ago. It is desirable to administer vitamin B complex intramuscularly daily (1 cc.) and ascorbic acid 100 mgs. orally each day. Patients are generally given a high caloric, high vitamin, low fat diet with extra feedings to the point of tolerance.

Although care is rightly given to the management of acute intoxication and withdrawal from alcohol, emphasis is placed upon long-term rehabilitation from the beginning of the inpatient phase of treatment. The approach to the patient is to avoid exclusive or disproportionate concentration upon an immediate or recent episode of drinking. Everything should be done to help the patient to recover from the current drinking situation as soon as possible and no element of punitiveness should allow the withdrawal period to be any more painful or unpleasant than it need be. Nevertheless, it should be made clear from the start that withdrawal from the alcohol and its immediate effects is not the long-term objective of therapy and that recovery from the immediate alcoholic situation does not necessarily mean that progress has been made with the basic problems.

A primary function of the therapeutic environment in the hospital is to give the patient a significant experience of the reality of his own corporate membership in a body made up of people who are like him and yet different. Within the group therapy sessions he experiences, often for the first time, the supporting, strengthening power of the whole group of patients and staff and comes to realize that he need never again attempt to function in lonely isolation. The strong organism of the hospital group comes to represent a model upon which he can build his concept of his membership within his family group, Alcoholics Anonymous, the community and the Church.

The efforts of the therapeutic team are directed toward achieving such understanding for the patient as well as for his family members and wherever the patient and other members of the family are willing and able, the latter are brought into the therapeutic situation as indicated.

### Rehabilitation: A Long-Term Process

While abstinence is a necessary and essential daily objective for the alcoholic, this does not mean the end of his problem. Actually, through his sobriety the alcoholic may be helped to recognize that as a sober member of his family and his community he may face and have to deal with more problems than he had while drunk. Formal therapy, therefore, must continue beyond the period of initiation of abstinence and in the DAS&R Clinic may last for at least a year or more. A number of patients have maintained regular contact with the clinics for as long as 13 years although not on a frequent basis. Abstinence becomes a sign of recovery and one of its expressions, just as uncontrolled drinking is correctly seen as a symptom of underlying disorder. The long road of rehabilitation may be far from smooth and may be punctuated by many crises of which an alcoholic slip may be only one variety. The alcoholic is called upon to face not only his own psychologic and other problems but also must cope with others' attitudes about him and his condition, many of which are unrealistic and cruel.

As the alcoholic maintains sobriety, it often happens that otherwise subclinical psychologic, domestic and psychosomatic problems come to light. Peptic ulcers, cardiovascular disorders and other medical problems may appear and require therapy. In some patients under treatment during the last 13 years in the Division of Alcohol Studies and Rehabilitation such problems have been prominent for four or five years after sobriety has been accomplished. With skilled therapy these disturbances may finally be abated so that the patient is now able to lead a well-adjusted, healthy life.

### Pharmacological Adjunctive Aids in the Rehabilitation of Alcoholic Patients

It is well known that alcoholics may temporarily or permanently transfer their addiction from alcohol to some other chemical such as the barbiturates. Because of this tendency, the use of pharmacologic adjuncts must be conservative and drugs used only for well-considered indications. Nevertheless, some pharmacologic adjuncts to rehabilitation have been used with beneficial results and the growing field of psychopharmacology offers hope for greater success in the care of alcoholics. The use of disulfiram (Antabuse) to enforce motivation for abstinence has been effective when correctly used. This substance, given in a daily maintenance dose of 250 mgs., is generally without any effects by itself. However, if the patient taking disulfiram drinks anything containing alcohol, he experiences, within about 10 minutes, symptoms of headache, faintness, prostration, pounding heart and other acute disturbances mainly referrable to a sudden rapid drop of systemic blood pressure. These symptoms of the disulfiram-alcohol reaction persist for about an hour after which the patient is left in a state of exhaustion. The certainty that he will experience this reaction can serve as a deterrent to alcohol use. A variety of objectives have underlain the use of disulfiram by alcoholics. It has been regarded as a kind of "pharmacologic fence" built around the patient to prevent him from drinking. The disulfiram itself might be thought of by the patient as a kind of policeman or, at any rate, the long arm of the therapist forbidding alcohol consumption. Some of the psychotic episodes which complicated the earlier use of disulfiram were probably due not to toxic side effects of the chemical itself, but to an impossibly high barricade built around the patient to isolate him from alcohol. The patient was unable to bear the interdicting force of a drug any more than he could tolerate another person such as his doctor or his wife forbidding him to drink. In our experience, the use of disulfiram is without value if it symbolizes imposition of a state of abstinence by the therapist, the patient's spouse or anyone else than the patient himself. Disulfiram appears to us to be effective only if the patient himself monitors its use and if he takes it as a part of his own daily acceptance of his alcoholism and his personal need for sobriety as a new way of life.

In our Division, disulfiram is made available solely for those who take it voluntarily as a means of daily reinforcement of acceptance of the need for sobriety. The patient is asked to take the daily dose of disulfiram only after he has reaffirmed his own powerlessness over alcohol and decided that he will seek another day of sobriety. This choice means that the patient himself accepts the disulfiram which through the remainder of the 24 hours represents his own motivation. Thus, disulfiram promotes a day-by-day pattern of life punctuated by a moment of decision each day.

While disulfiram appears to be more effective in some patients than in others, the contraindications for its use are not as wide as when the substance was first introduced. Now these include psychoses, convulsive disorders, cardiovascular-renal diseases and diabetes. Patients who are geographically unstable and have no fixed home are generally thought of as unsuitable cases for disulfiram. Hoff and McKeown[9] and Hoff[10] have described the use of disulfiram in the Virginia Division and have discussed its therapeutic effectiveness. Previously, disulfiram was initiated only as a part of the hospitalization phase, but now is often begun as an outpatient procedure and may be safely given by the private practitioner in the office providing the patient is carefully examined and plans are made to see him on a regular basis. It should never be given within 48 to 72 hours of the last ingestion of alcohol and the usual daily dose by mouth is 250 mgs. In some patients, particularly small women, this dose may produce some drowsiness, and in men, sexual sluggishness. These symptoms are easily corrected by reducing the dose to 125 mgs. a day.

In the Virginia Division patients were formerly given a planned disulfiram-alcohol reaction test. On the fourth day after initiation of disulfiram (1.5 grams on the first day of administration, 1.0 gram the next and 0.5 gram on the two following days) the patient was given 30 cc. of 90 proof whisky and allowed to experience the reaction under supervision. Analysis of the results of therapy has subsequently shown that disulfiram patients who experienced the planned reaction test did not have a significantly different eventual rehabilitation record from those who did not. Therefore, the planned reaction test has been abandoned. Patients have been maintained on disulfiram for as long as three or four years continuously and up to the present no toxic manifestations of its long-term use have come to light.

An analysis of a group of 1,020 disulfiram treated patients contrasted with 484 controls revealed that the test group has significantly better records of therapeutic success than the controls.[10] The disulfiram group also has a much better record of follow-up in the outpatient clinic than do the controls. Disulfiram acts in part, therefore, to identify those more highly motivated patients who will continue treatment more faithfully. A test of this hypothesis shows that the motivational factor is highly important.

In the Virginia Division, chlordiazepoxide (Librium) has been used not only in the management of acute intoxication and withdrawal from alcohol but also as an adjunct to long-term psychotherapy. In the acute patient, chlordiazepoxide, 100 mgs. orally or intramuscularly, followed by 10 to 25 mgs. four times a day by mouth, has been notably effective in calming the agitated patient and tranquilizing the tremulous alcoholic in the withdrawal period as well as reducing the incidence of delirium tremens. Used for periods of a year or more, chlordiazepoxide, in doses of 40 to 100 mgs. a day, has been associated with improved follow-up records in the clinic and has been effective in abating tension, psychovisceral symptoms, sleeplessness and anxiety. With chlordiazepoxide as an adjunct to psychotherapy, there appears a greater willingness and ability to explore and face personality problems and life situations. Although the mechanism of action of this psychopharmacologic agent is not completely understood, it appears from recent studies of Carroll, Hoff, Kell and Suter[7] that chlordiazepoxide, in part at least, acts upon higher cerebral autonomic control mechanisms, serving to block cerebrally-induced visceral disturbances.

Previous studies of Hoff and colleagues[11, 12, 13] have established in experimental animals and in man the existence of cortical and higher subcortical mechanisms for the control of visceral functions by the autonomic nervous system. Stimulation of specified isocortical, paleocortical and other higher cerebral areas evokes alterations of systemic blood pressure, changes in intracardiac dynamics, modifications of peripheral circulation as well as functional and vascular changes in the kidneys, gut and other organs, including the heart itself. In both acute and chronic experiments, changes have been produced in pulmonary, coronary and bone-marrow circulation as well as epinephrine and norepinephrine secretion. It appears that these cortical autonomic control mechanisms may be related to forms of behavior and emotional activity. Disturbances of these higher cerebral autonomic mechanisms may be a part of the underlying etiologic disorders in the alcoholic. Therefore, neuropsychologic agents which can be shown to protect the autonomic nervous system from higher cerebral over-response to stress may have a value in long-term rehabilitation of alcoholics. Actually, alcohol itself has been shown in our laboratory to be an imperfect attenuator of centrally generated autonomic disturbances and, in fact, under some circumstances may act to exacerbate the cortical autonomic responses. Alcohol thus appears to be a defective tranquilizing agent, especially for some individuals and under certain circumstances. It has been shown, on the other hand, that chlordiazepoxide may protect the viscera from harmful cerebral autonomic dysfunction. Thus the mechanism of action of chlordiazepoxide may be to reduce cortical autonomic overactivity, thus facilitating the beneficial effects of psychotherapy.

In a recent paper, Hoff[14] has reported the results of therapy with 50 alcoholic patients receiving chlordiazepoxide in amounts of 10 to 25 mgs. by mouth four times a day for a year or more while attending outpatient clinic. Of this group, 72 per cent were classified as improved, 10 per cent as unimproved, and 18 per cent as unclassified. In contrast, 52 per cent of 50 matched control patients were improved, 16 per cent unimproved, 25 per cent unclassified and 8 per cent discontinued early. The difference between chlordiazepoxide group and the control group was reported as significant at the 5 per cent level ($x^2$ equals 4.24; p equals 0.01-0.05). The chlordiazepoxide group had a much higher follow-up rate than the control group and medical and psychologic testing at the time of elective rehospitalization has revealed no toxic changes in the former group. Increased tolerance of the drug or its compulsive use has not been encountered in any patient in this test.

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# Management of Acute Withdrawal Symptoms of Alcoholism

At the Saul Clinic, an alcoholic patient is simply one who has lost control of his drinking. Loss of control means that once he has started to drink, he cannot stop. This loss of ability to stop drinking may be as insidious as a college man's getting drunk in spite of himself, or, as overt as the party-goer who drinks everything in sight within the first hour, even though he started with the idea that he would take only three drinks and stop. This statement is in general agreement with the idea held by most workers in this country who also agree that there are two components of this disease: psychologic and physiologic.

**The doctor-patient relationship with the alcoholic is discussed and the treatment of 80 consecutive patients admitted to the C. Dudley Saul Clinic, Philadelphia, is reported.**

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Although many people are not convinced of it, I feel that there is ample evidence that the disease is due to the effect of alcohol on the body, or the reaction of the body to the ingestion of alcohol. The reasoning behind this is roughly as follows: (1) there would be no alcoholism if the patient did not take alcohol into his system, (2) there is no evidence of a cure in the sense that a patient, once proven to be alcoholic, can return to social or "normal" drinking again, (3) the alcoholic presents evidence of a true physiologic addiction, and (4) there is some evidence of differences in the metabolism of alcohol in the alcoholic and the non-alcoholic patient. On the other hand, it cannot be denied that the alcoholic patient has many and varied psychologic problems. For some workers the controversy is how much is caused by basic personality and neurotic patterns and what part constitutes the effect of alcoholism.

Before discussing the mechanics of the treatment of alcoholism, I feel that the role of the general practitioner in dealing with the alcoholic should be examined. This boils down to an attitude. The physician must remember that he is not dealing with a cut and dried disease, but with an individual for whom the most important step is to identify himself as an alcoholic.

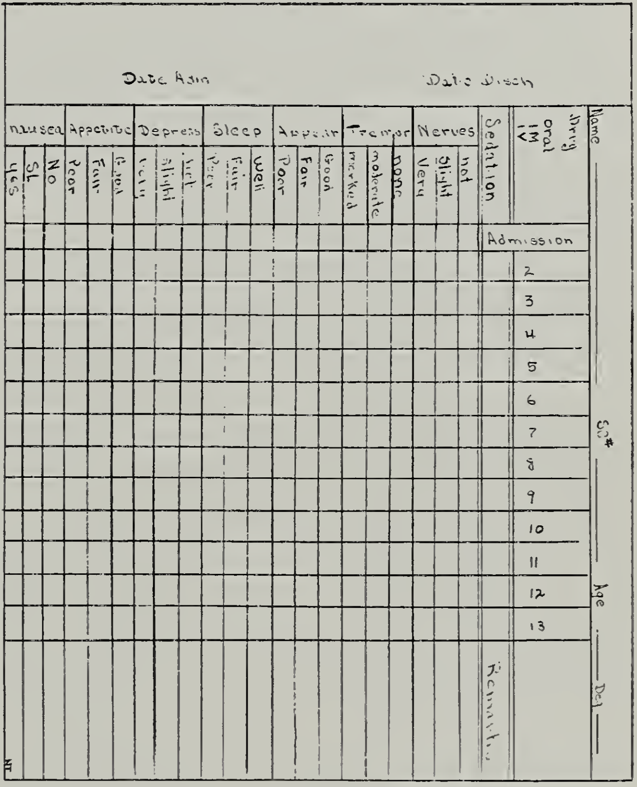
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Fig. 1. Check sheet showing recordings.

Among many general practitioners, alcoholism has been thought of as a referable disease. This puts it into the classification of major surgery, overt psychosis, tuberculosis and some obscure medical conditions. The usual reason for referring a patient to a specialist is that the doctor does not feel competent enough to handle the case. I can assure you that any alert, well-trained general practitioner can treat alcoholism. Competence aside, the question to treat or to refer, will be answered by the doctor's likes and dis-likes. The feelings of the practitioner about the idea of alcoholism should be taken into account at the time of the initial interview. If he regards drinking as sinful, it may be difficult to recognize the sinner as a patient. If he drinks, but has the common thought that a man should be able to take it or leave it alone, he would have a tendency to feel superior to the patient. Many other attitudes such as envy of the "fun" of the alcoholic, disgust with the early morning calls and the lack of payment, and frustration with the patients who are treated and regain sobriety, only to start the pattern all over again, tend to influence the doctor-patient relationship.

It must be remembered that the patient is a patient and not any of the projected pictures of one's own emotional response.

The other party to the initial interview, the alcoholic, also has feelings, attitudes, experiences and fears. He has been pled with, threatened, ostracized, incarcerated, browbeaten and moralized with, all to no avail. These people are sick and should be treated as you would treat any other victim of any other disease.

The general practitioner must approach the patient with empathy and interest. He must realize that this is an extremely sensitive individual who is looking for any kind of an excuse to get out of the treatment situation. Although it is quite evident that there are both physiologic and psychologic components in this complex condition, it must be realized that the best approach to the patient is made on the basis of a physiologic change in the ability of the body to metabolize alcohol. If one starts discussing the psychiatric implications with a patient who has already decided that he is mentally sick, this will surely chase him away because of his fear of being "bugged" (sent to a psychiatrist or a mental institution). He is more prone to understand a physical illness and feel much more comfortable in entering treatment. A most important consideration is that when he comes to treatment, he is in pain (either physical or psychic) and if you do not give him immediate relief, he may never come back. The general practitioner should do something immediately to make the patient more comfortable and encourage him to return (by means of good rapport).

As a result of these basic considerations, it follows logically, that both physiologic and psychologic methods are involved in the treatment of alcoholism. The therapy of alcoholism must, of necessity, be directed to two distinct entities: acute alcoholism and chronic alcoholism. The therapy of acute alcoholism is primarily physiologic.

## The Treatment of Acute Alcoholism

The objectives of the treatment of acute alcoholism are as follows: (1) to get the patient sober, as quickly and as painlessly as possible; (2) to discover any intercurrent medical or psychiatric complication; and (3) to try to make the patient realize that alcohol has brought him to the clinic or hospital; this might be sufficient motivation for him to follow through with the suggestions to attend A.A.; continue vitamin therapy, and the judicious use of tranquilizers as prescribed—all based on the assumption that one drink is all that stands between a good productive life and repeated returns to the hospital, or worse.

In order to accomplish these objectives, it is important that the patient be in the best possible condition physically and mentally as soon as possible.

I feel that institutionalization of the patient for the treatment of acute alcoholism is the best way to handle the situation. Although some patients may be able to rid themselves of the alcohol at home, most need a period of insulation in a place where the next drink that has become so important as to exclude everything else in his life cannot be gotten.

On admission, each patient received intravenously 1,000 cc. of 10 per cent glucose in water and 1,000 cc. of 5 per cent glucose in saline. These solutions contain vitamin B complex. An additional 1,000 cc. of 10 per cent glucose is given 12 hours later. Each patient is also given, throughout the period of hospitalization, daily intramuscular injections of thiamin hydrochloride (100 mg.) as well as daily oral doses of other vitamin B fractions and ascorbic acid.

Psychomotor agitation, with symptoms of restlessness, nervousness, insomnia, anorexia and depression, is one of the most distressing symptoms observed in alcoholic patients during the period of recovery from an acute bout of intoxication. Over the years, we have used many substances to alleviate these symptoms because it is felt that it is necessary for the patient to be mentally clear and to feel better in order to start the therapy for chronic alcoholism. To this end, I would like to report our experience with Librium (chlordiazepoxide hydrochloride).

## Procedure

Eighty consecutive admissions to Saul Clinic were selected for this study. All received the routine therapy described. In addition, the odd-numbered patients, if admitted during the day, were given 100 mg. of Librium either intravenously, intramuscularly or by mouth at bedtime; if admitted after 9:00 p.m. they received the same dose of Librium stat. This was followed up with 10 mg. by mouth four times daily for the remainder of the hospital stay. The even-numbered patients, considered as controls, were given either placebo, sodium amytal and Seconal, Thorazine, Sparine or other tranquilizers. The subjective symptoms of psychomotor agitation were translated into objective findings in the areas of sleep, appearance, appetite, tremor, depression and nervousness. Figure 1 is a check sheet showing how this was recorded. The numbers at the top of the page refer to eight-hour intervals. The scores of controls were compared with the patients receiving Librium. The results are shown in figures 2 and 3. All patients with complications were ruled out.

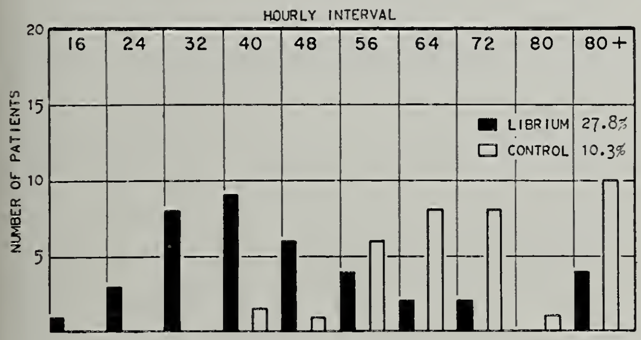

**Fig. 2. Composite graph showing time necessary to reach baseline optimum response; comparison of Librium with controls.**

## Results

Figure 2 illustrates the total response at eight hourly examinations, based on the check sheet of responses of patients in the six areas described (nervousness, tremor, appearance, sleep, depression and appetite). The worst possible response would be 18 and the optimum response would be six. Thus one sees that the tendency is to approach six; the curves of this chart compare the rate drop of the controls with that of the patients receiving Librium. The most significant difference is noted at the eight hour examination, at which time the Librium curve dropped by 4.3 while the control curve dropped by 0.5.

Figure 3 shows definitely that the Librium patients arrived at the optimum response level much sooner than the controls. At the examination after 40 hours, 21 (53.8 per cent) of the Librium-treated patients had reached this level while only one of the controls did. It is interesting to note that within 80 hours, 90 per cent of the Librium patients while only 72 per cent of the controls were thus helped.

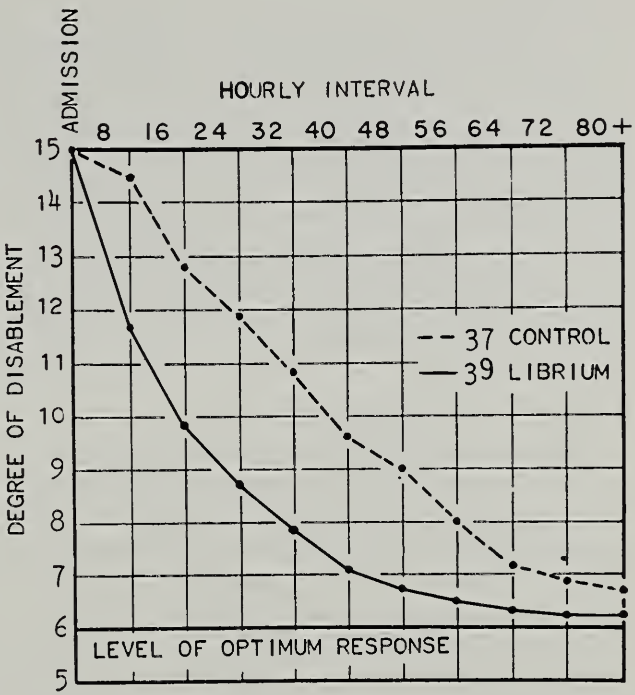

**Fig. 3. Composite curves showing total response in all areas measured comparing Librium with controls.**

## Treatment of Chronic Alcoholism

The objectives in the treatment of chronic alcoholism are: (1) identification, (2) surrender, (3) realization.

"Identification" by the patient as an alcoholic is a prerequisite to successful treatment. Simply translated, this means that regardless of the psychologic cause (pathologic personality, neurosis or psychopathology of any sort) the patient must relate his actions and attitudes to those of people who are known to be alcoholics.

"Surrender" is the process by which a patient recognizes the physiologic implications of alcoholism and accepts the fact that any time he takes any quantity of alcohol, his particular pattern of binge-drinking will follow sooner or later. This, of course, implies rather paradoxically that the only way to defeat the consequences of alcoholism is to surrender to the fact that he cannot ingest any alcohol.

The word "realization" implies complete understanding of the first two coupled with the recognition of the egocentricity of so-called "alcoholic behavior," and the necessity for making meaningful social relationships with other people and groups.

Of course, the accomplishment of these objectives requires treatment which is psychiatrically oriented. An understanding of the individual and dynamics of his relationship to his wife, employer and society in general is indispensable to the supportive psychotherapy which is indicated. Depending on the patient this may be handled in individual or group therapy. All of this is directed toward proving to the individual that an interesting, constructive and happy life is entirely possible without alcohol.

### POST-ALCOHOLIC TENSION STATE

Tension, best described as anxiety reaction, is an inherent syndrome during the recovery process in patients who remain sober for one week to several years. This tension causes many patients to become uncomfortable, which may lead them to a resumption of drinking.

It is not necessary to know the specific cause of this anxiety (physical depletion or psychologic causes such as resentment or self-pity) in order to produce immediate relief. Librium in dosages from 10 mg. twice a day to 25 mg. four times a day was used in 67 out-patients who ranged in age from 24 to 63. Of this number, 18 were women. The drug was given over periods of one week to six months and all but five reported immediate (within 24 hours) relief from their symptoms of anxiety. The five who did not benefit were given other tranquilizers and achieved results. It is significant to note that in these 63 patients, not one had any side effects whatsoever.

An interesting note to the use of Librium in this way is the fact that 46 of these patients reported that they had voluntarily reduced the dosage of their medication because they felt so well. This is important in that any type of sedative medication for the alcoholic is dangerous because of a tendency to increase the dose; many even become addicted. This is the principal reason why we do not like to use paraldehyde, the barbiturates or choral hydrate and the bromides.

### SUMMARY AND CONCLUSIONS

Some concepts in the doctor-patient relationship in alcoholism are described.

The use of Librium to facilitate this treatment was studied in 80 consecutive patients admitted to the Saul Clinic. The series was divided into two groups, one receiving Librium and the other a variety of other drugs.

Librium was found to be effective in both the management of acute alcoholism and for the anxiety reaction in the sober alcoholic.

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**ARCHER TONGUE,** *Lausanne, Switzerland*

# European Programs for the Control of Alcoholism

I AM HAPPY to have the privilege of participating in this symposium and also the great pleasure of visiting St. Louis. It has been most interesting to visit the Malcolm Bliss Mental Health Center and I do congratulate you on the excellent facilities that are being set up to deal with alcoholic patients here. In the international field the International Bureau welcomes having close contact with the St. Louis Center and I am certain that this cooperation will develop. The Bureau has greatly appreciated the participation of both Dr. Ulett and Dr. Pittman in international meetings on alcoholism in Europe in the past.

The question of the management of the alcoholic is receiving increasing attention by both public authorities and private bodies throughout the world. I have been impressed by the facilities which I have seen in the United States and the growing programs of education on alcoholism here.

In Europe, there has been a significant development in the field of the provision of treatment facilities and information of the public since World War II. Different systems and procedures have been developed in harmony with the different cultural backgrounds to be found in Europe. For instance, the drinking patterns and general attitudes of the population in the Scandinavian countries vary considerably from those in the wine drinking countries of Southern Europe. Even the average concept of what constitutes an alcoholic may vary. Whereas the type of alcoholic generally recognized when that term is used will be the same in Scandinavia and Britain as here in the United States, the concept in France, for instance, will be otherwise.

The Scandinavian or North American "species" of alcoholic is in the main the person who has "lost control" of his drinking habits. Once having started to drink on a special occasion he cannot be certain that he will not end in a drunken stupor. On the other hand, he may be able to abstain completely from drinking for long periods. The prevalent "species" of alcoholic in France and other wine drinking countries rarely loses control on particular occasions. Yet, unlike his counterparts in countries in which spirit-drinking is the custom, he is unable to abstain from drinking for any length of time. He drinks, indeed throughout the day, with meals, before meals and after meals, and he becomes drunk only infrequently or possibly not at all. Thus Anglo-Saxon and Scandinavian authors describing alcoholism generally have the "loss of control" variety in mind, whereas French writers in the main refer to the "inability to abstain" species.

**Programs used in various European countries and in Russia are described.**

**Mr. Tongue is Director of the International Bureau Against Alcoholism, Lausanne, Switzerland.**

In order to describe the types of program which have developed in Europe, for sake of convenience one can refer to four main systems. The first of these may be referred to as the Nordic type and represents the earlier programs which have been in operation in Norway, Sweden and Finland for many years. Here there is in each administrative district of the country a so-called sobriety board which is responsible for advising alcoholics, seeing that they undergo the necessary treatment and, in general, undertaking education of the population in the area on this question. These bodies come under the social affairs ministries of their countries and receive governmental financial support for their work. This system is linked with the state ownership or control of considerable sections of the alcoholic beverage industry. In Finland, for instance, the social affairs ministry controls the alcohol monopoly and uses profits from it for the work of the district boards.

The second type of program is to be seen in France which has the highest per capita consumption of alcohol in the world. France is somewhat different from other wine-drinking countries in that while she heads the list of per capita wine consumption, she is also high up on the list of distilled spirits-consuming countries. There are in addition 2,500,000 Frenchmen who have the right to distill at home, and there is a big black-market problem. This means that the question of alcoholism is understood in that country to include not only the treatment of alcoholism but also economic problems which arise in connection therewith. A fine comprehensive educational program has been set up through the governmental High Committee of Study and Information on Alcoholism directly responsible to the Prime Minister, and a treatment program organized by the Ministry of Health works through the county departments of health throughout the country.

The third type of program is that in operation in eastern Europe. In the Soviet Union, for instance, since 1954 all members of the medical profession have been requested to cooperate in informing the public on the dangers of alcoholism, and a program in which education and treatment are integrated has been set up and organized by the Central Institute of Health Education. Outpatient treatment is given in the psychoneurologic dispensaries, inpatient treatment in psychiatric hospitals and colonies. The public's attention is called to the facilities for treating alcoholism; but alcoholics are not regarded solely as patients, the role of personal responsibility also is emphasized.

In the fourth group I would refer to what I might call the mixed systems which illustrate cooperation between the authorities and private enterprise. Perhaps one of the best systems in Europe is that in the Netherlands where consultation bureaus for alcoholics are established in the main cities, in which a team of professional people in cooperation with private groups, such as Alcoholics Anonymous and church organizations, are well equipped to deal with alcoholic patients, mainly on an outpatient basis. The education of the public through the contacts made with the family, employers and other groups does have the effect of reaching large segments of the population, and the fact that the Netherlands have one of the lowest acoholism rates in Europe must likely have been influenced by this well-organized establishment of facilities throughout the country.

In Switzerland there is a Federal Commission on Alcoholism which plays a consultative but important role, the executive powers in health matters residing in the different cantons. This Commission has, for instance, recognized the general practitioner as a key person in this field because it is he who is in direct contact with the general public and can influence their attitude on this question. The Federal Commission has recently issued a brochure which will be distributed to all general practitioners in the country giving them the necessary background information regarding the extent of alcoholism, the latest methods of treatment and facilities available. It is hoped that increasing cooperation will develop in this way between the federal and cantonal authorities and the individual doctors resulting in a more widespread understanding of the problem on the part of the public. It is on this note that I would like to conclude because I believe that it is the general practitioner who is a key person in this whole question of education on alcoholism and the development of a right attitude to this problem among the population in general. I believe that the organization of such symposia as we are attending here today is most important and that in other countries similar meetings will be organized because they play a significant role in stimulating interest and concern in alcoholism programs and encourage cooperation in this field.

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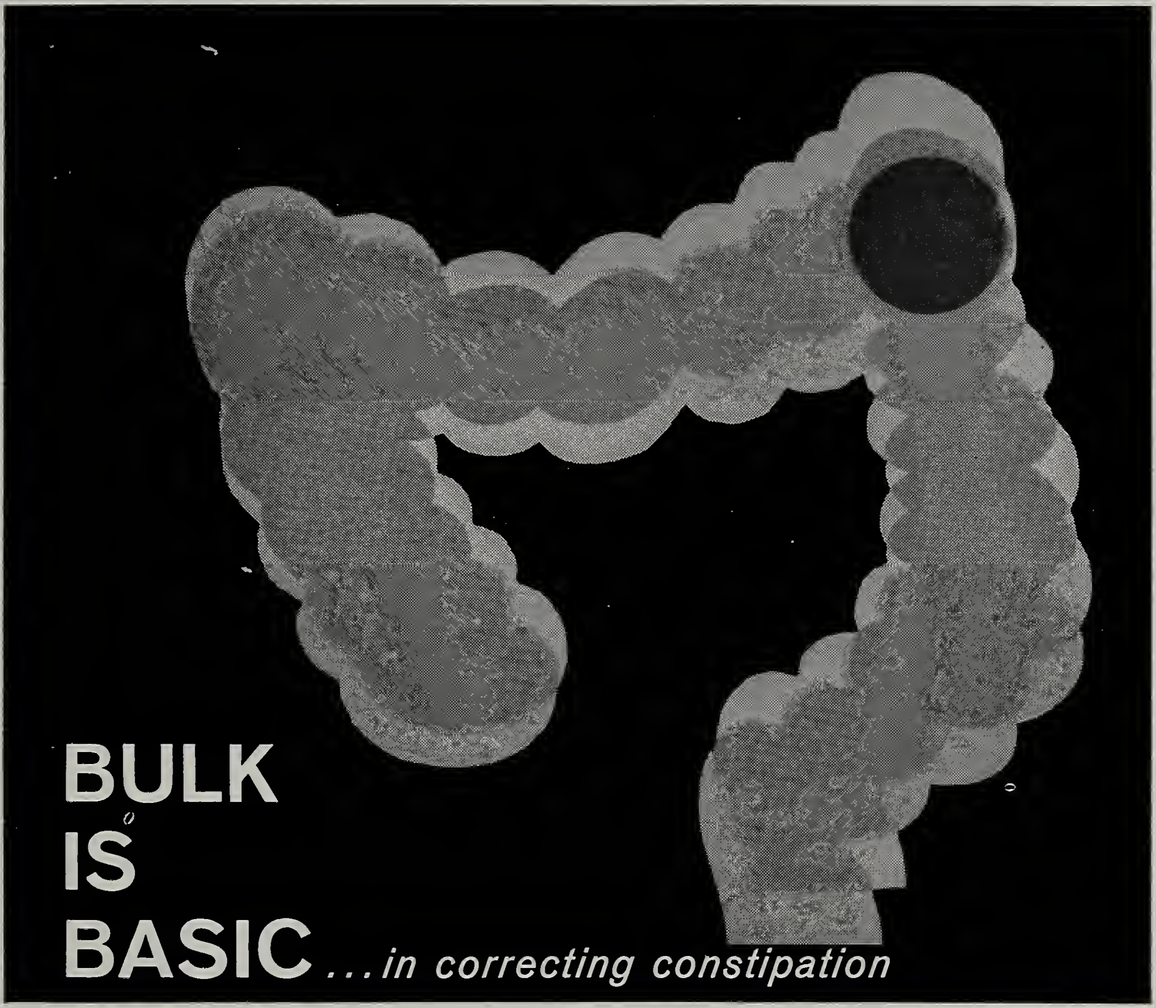
## CONFERENCE ON THE MEDICAL ASPECTS OF SPORTS

The Fourth National Conference on the Medical Aspects of Sports sponsored by the American Medical Association, under the auspices of the AMA Committee on the Medical Aspects of Sports, will be held in Los Angeles, at the Statler Hilton Hotel on November 25, 1962. The Conference will be held in conjunction with the Clinical Meeting of the American Medical Association, November 25-28, 1962.

As was true of the previous Conferences on this subject held in Denver, Colorado; Washington, D. C.; and Dallas, Texas, the Fourth Conference will cover a wide range of subjects. Included will be papers, panels and discussions relating to training and conditioning, prevention of injuries, recognition, referral and treatment of injuries, the physiology of sports participation and other subjects.

Those interested in receiving announcements concerning the Conference should address the Secretary, Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.



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*Research in the Service of Medicine*

SOLOMON GARB, M.D., *Columbia*

# Thermonuclear Survival

## *Fire, Firestorms, Burns and Blindness*

**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine*, and are published with permission of that journal.**

**Dr. Garb is secretary of Medical Education for national Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.**

**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

Since the heat radiation from the fire ball of a thermonuclear explosion is responsible for the production of fire, firestorms, burns and blindness it is appropriate to consider these effects in a single paper. Although there has been a great deal of comment about these results of heat radiation from the bomb, much of that comment has been incorrect or misleading. There has not been a large amount of experience with these effects, fortunately for the human race, and it is therefore difficult to predict with any great degree of certainty just what the effects of a particular detonation would be. However, the available evidence appears to be enough to allow some reasonable plans for avoiding the worst of these effects.

First consider the probable damage which can be done by the radiant heat from the fireball from a thermonuclear explosion and then, subsequently, the protective measures which can be employed. The heat radiation from the fireball is emitted in two pulses. The first pulse is emitted so rapidly that no conceivable reflexes can protect against it. This includes the blink reflex. The second pulse, however, is delivered over a period of up to six seconds and some protective measures may be helpful. The range of the heat from the fireball is extensive, going out well beyond the zone of destruction of buildings. Assume that a 20 megaton bomb bursts at approximately ground level while the day is clear and there has been no recent rain. Under those circumstances the heat traveling with approximately the speed of light can cause burns and blistering of the exposed skin at a distance of approximately 20 to 25 miles. In addition, if those rays happen to go through the cornea and strike the retina they can produce burns of the retina which would cause blindness. This latter effect can take place only if the person involved is looking directly at the spot where the fireball is going to be and is not shielded by any buildings. This will not be the case with most people. Statements have been made to the effect that an "uncontrollable reflex" will force people to look at the fireball and become blinded. This is nonsense at best. The blink reflex takes place far more rapidly than the body, neck or eyes can be shifted to look at anything. In the event that a thermonuclear explosion takes place, the amount of light given off in the area involved will be so great that an involuntary blink reflex will occur long before any movement of the eyes is possible.

At the same approximate range, that is, about 20 miles from ground zero, highly inflammable materials such as paper and rotted wood will burst into flame. Protected inflammable materials will not burst into flame at those ranges but will burn at a closer range. Houses which are constructed so that unprotected inflammable material is exposed to the direct rays from the fireball will probably catch fire. A substantial proportion of them will burn to the ground. The chances are that a large number of houses within a 20 mile radius of a 20 megaton bomb will burn. This however, should not be confused with a firestorm. There are many essential differences between fires and firestorms and it is important to keep these differences clearly in mind.

In an ordinary fire, the major danger comes from the heat and protection against that heat is relatively simple to provide in the appropriate type of shelter. In the case of a firestorm, however, other factors are involved. In the firestorm area, large masses of inflammable material from an area of at least one square mile burn fiercely so that a single fire is formed. Air rushes in from the periphery at gale velocity, feeding oxygen into the fire. At the center a huge chimney effect takes place, with the hot air and flames rising toward the sky. The heat in a firestorm area is far more intensive than the heat in any ordinary fire. In the firestorm, any combustible material will burst into flame even if it is not touched by flames from other burning material. Every place on the ground within the firestorm range will be subjected to temperatures of more than 1,000 F. (the maximum temperature in most ovens is 600 degrees). As a result of the enormous amounts of combustible material being burned there is a depletion of oxygen and an accumulation of carbon monoxide. Therefore, in a firestorm area, insulation against heat would not be sufficient protection. It would also be necessary to provide oxygen, keep carbon monoxide away, and absorb exhaled carbon dioxide. These are, fortunately, feasible objectives.

A firestorm takes place only under rather exceptional circumstances. All those circumstances are not yet known. Many attempts by the U. S. Air Force to produce firestorms in Germany and Japan failed. There is information only about the few in which their efforts succeeded. Firestorms will not take place unless at least 20 per cent of the total area involved is covered by buildings. If there is fog or if there has been a recent rain the likelihood of a firestorm is also much less.

The best evidence available to judge the probable extent of a firestorm comes from the studies of what happened at Hiroshima and Nagasaki. Although atom bombs in the kiloton rather than megaton range were used against those cities, the principles involved in terms of fires and firestorms are exactly the same. In both cases, it was found that firestorms did not take place in the peripheral area where primary ignition by thermo-radiation was to be expected. In theory the 20 kiloton bombs dropped over Hiroshima and Nagasaki could have produced firestorms over an area of about 13½ square miles. Actually, however, firestorms covered an area almost identical with the area of serious blast damage. In the case of Hiroshima the area of serious blast damage was 4.7 square miles and the total area burned was 4.4 square miles. In the case of Nagasaki the area of blast damage was 1.0 square miles and the total burned area 0.9 square miles. If this past experience is any guide, the probabilities are that firestorms will take place only in the area of blast destruction of a hydrogen bomb, that is within 10 miles of the impact point of a 20 megaton bomb. Between the 10 and the 20 mile rings there would probably be many scattered fires, some of them severe, but no true firestorms.

On the basis of experience with other firestorms, it appears probable that most firestorms would last about six hours. However, on the basis of prudence, it would be advisable to plan on protection for at least 12 hours. There will always be a certain amount of warning before a firestorm starts. They do not occur instantaneously. It generally takes 15 minutes or more before the fires grow hot enough and dense enough to coalesce into a firestorm. This would be particularly true in the case of fires set by the blast of a thermonuclear weapon since only one side of any particular structure would catch fire initially. During this interval, before the full-fledged firestorm develops, there is time to seek shelter in an appropriate structure if such a structure is already in existence.

### BLINDNESS

Burns of the retina can take place at considerable distance from the detonation of a thermonuclear weapon. They cannot, however, occur unless the individual happens to be looking in the direction of the exploding weapon at the time it detonates. Under ordinary circumstances, the amount of heat radiation delivered by any device is inversely proportional to the square of the distance. However, the lens of the eye concentrates light to focus it on the retina. In this way it almost balances out the attenuation of the radiation by distance. Because of this, it has been stated that with a high altitude explosion of a thermonuclear weapon, burns to the retina can occur as far as 345 miles away. Although this figure is correct, it should be seen in perspective and not unduly exaggerated. The retinal burn which will occur will be of pinpoint size, because the area of the retina on which the image falls will be small at such distances. Thus, this type of retinal burn will produce a small scotoma but will not produce blindness.

### PROTECTIVE MEASURES

*Protective Measures Against Fires.*—Against the hazard of ordinary fires, simple insulation against the heat would be sufficient. Thus any shelter buried under three feet of earth would afford adequate protection. However, no one can be certain that an ordinary fire rather than a firestorm will take place in any built-up area. Therefore those residing in areas in which 20 per cent or more of the ground is covered by buildings should plan to have protection against firestorms as well as fire.

*Protection Against Firestorm.*—For protection against firestorms, insulation against the tremendous heat is a first requirement. Ordinary basement shelters, of course, would be completely inadequate. The only practical protection against the heat of a firestorm is a layer of earth at least three feet thick over a shelter with all entrances blocked by at least three feet of sandbags. Parenthetically, it should be stated that only noninflammable materials such as steel or concrete should be used to hold any weight in a shelter designed to resist a firestorm. Studies have been done on the effectiveness of three feet of earth as an insulation against firestorm.[2] A shelter was constructed and covered with three feet of earth. All around it, in a four acre area, 300 tons of fuel were stacked in an arrangement similar to that expected from a densely populated area of single story buildings. This combustible material was then set afire. The surface heat within this area was equivalent to that produced in firestorms. Temperature measurements inside the shelter showed that negligible amounts of heat were transmitted through the three feet of earth covering into the shelter proper. Thus it appears that a three foot thick earth covering at every point will produce adequate protection against the heat of a firestorm.

The seepage of carbon monoxide into a shelter can also be prevented by appropriate design of the shelter in advance. Carbon monoxide will not seep through a three foot layer of earth in any significant concentrations. Therefore the only danger points are entrances and exits. These may be protected in two ways. First, all cracks may be sealed with tape, clay, mud, wet rags or anything else available. In addition, pressure relationships within the shelter can be arranged so that there is a slight outward flow of air through any cracks which might remain. This latter step is probably an unnecessary refinement since the studies in the simulated firestorm suggested that little carbon monoxide would get into a shelter whose entrances were appropriately designed.

The next problem in providing protection against firestorm is the supply of oxygen. In general, the average adult requires about one cubic foot of oxygen per hour. This figure should not be confused with earlier figures given for ventilation with air in which it was stated that three cubic feet of air per minute were needed. The difference comes from the fact that air has only 20 per cent oxygen and of that only a relatively small amount can be taken up by the alveoli of the lungs. Repeated studies have shown that the average adult can be quite comfortable if one cubic foot of oxygen per hour is available and if the exhaled carbon dioxide is absorbed.

There are three possible ways of supplying oxygen within the shelter. One way involves the use of chlorate candles. These candles contain sodium chlorate, iron and other materials. When burned, the iron and chlorine combine, liberating pure oxygen which is suitable for breathing. These candles unfortunately, give off a great deal of heat and are therefore not suitable for use in the ordinary family shelter. They might, however, be practical if large numbers were to be used in a large community shelter in which facilities for absorbing the heat were also available.

A second method of supplying oxygen is through the use of ordinary medical cylinders. It would probably be necessary to purchase such cylinders and have them filled with oxygen since the usual oxygen supply companies rent rather than sell cylinders. For shelters with two or more families a 220 cubic foot cylinder may be the solution to the oxygen supply problem. A cylinder of this sort weighs about 130 pounds empty and up to 140 pounds when filled. Although suitable for shelter holding two or more families, it may be a bit too cumbersome for a one family shelter.

For the one family shelter the smaller size cylinder containing 110 cubic feet of oxygen and weighing about 75 pounds is probably a better choice (see table 1). In addition to the oxygen cylinder and a simple valve which can be obtained from the cylinder manufacturer it will be necessary to have a reducing valve. These may be purchased from a number of different sources available to most physicians. There may be some question as to how oxygen supply is to be regulated during a firestorm. It will probably not be practical to attempt to measure actual oxygen concentration in the atmosphere of the shelter. However, estimates can be made which will usually be quite accurate. Fortunately there is a rather wide range of oxygen concentrations which are suitable for relatively short periods in a shelter. Although the oxygen content of the ordinary air is approximately 21 per cent, a reduction to as low as 14 per cent would not be harmful nor would a concentration of 40

TABLE 1

MATERIALS FOR BREATHING DURING FIRESTORM

| *Type* | *Manufacturer* | *Model No.* | *Capacity* | *Weight* | *Cost Approx.* | *Hrs. Protection for Family of 5* |
|---|---|---|---|---|---|---|
| Oxygen tank (empty) | Harrisburg Steel Co., Harrisburg, Pa. | Standard weight<br>Standard weight | 110 cu. ft.<br>220 cu. ft. | 70 lbs.<br>128 lbs. | $40 FOB<br>$50 FOB | 22<br>44 |
| Oxygen tank valve | Same | Standard | | 1½ lbs. | $3.35 | |
| Reducing valve | Several can usually be purchased from local oxygen distributors | | | 4 to 8 lbs. | $30 to $50 | |
| *Carbon Dioxide Absorbents* | *Manufacturer or Distributor* | *Main Active Ingredients* | *$CO_2$ Absorbing Capacity—Ideal* | *Cost, Approx. per lb., FOB* | *Amount Need for Family of 5 for 12 Hours* | |
| Metalime | McKesson Appliance Co., 2228 Ashland Ave., Toledo 10, Ohio | Sodalime | About 2.45 cu. ft. of $CO_2$ per lb. | See local distributor | Not definitely known—probably 20 to 40 lbs. | |
| Baralyme | Thomas A. Edison Industries, Stuyvesant Falls, N. Y. | Barium Hydroxide Lime, U.S.P. | 1.56 cu. ft. of $CO_2$ per lb. | $0.57 in 2 lb. lots; $20 for carton of 25 2-lb. packages | 25 to 30 lbs. | |
| Cardoxide | Mine Safety Appliance Co., Callery, Pa. | Sodalime | 2.45 cu. ft. of $CO_2$ per lb. | Not given | 20 lbs. | |
| Sodalime | Aloc Scientific Co., 1831 Olive St., St. Louis 3, Mo. | Sodalime | 2.45 cu. ft. of $CO_2$ per lb. | $ .80 per lb.<br>3.90 per 5 lbs.<br>19.25 per 37 lbs. | 20 lbs. | |
| Sodasorb | Aloc Scientific Co., 1831 Olive St., St. Louis 3, Mo. | Barium calcium hydroxides | | $ 1.75 per 3 lbs.<br>18.00 per 36 lbs. | 25 lbs. | |
| *Other* | | | | | | |
| Canister for carbon dioxide absorbents | Local sheet metal shops | 10 in. diameter stove pipe, 1 linear foot for each 10 to 16 lbs. of absorbent | | | Approx. cost $25 | |
| Blower for canister | | Air-intake blower (table, in Ventilation Chapter) may be temporarily disconnected and used to blow shelter air through canister. | | | | |

Complete Oxygen Supply, Carbon Dioxide Absorbing Systems

| *Type* | *Manufacturer* | *Actions* | *Capacity* | *Size* | *Cost Approx. FOB* | *Hrs. Protection for Family of 5* |
|---|---|---|---|---|---|---|
| Chemacon canister | Mine Safety Appliance Co., Callery, Pa. | 1. Provides oxygen<br>2. Absorbs $CO_2$<br>3. Removes some odors | About 60 cu. ft. of oxygen supplied, and an equivalent of $CO_2$ absorbed | 18 in. diameter<br>8 in. high | $150 | 12 |
| Chemacon air regeneration apparatus (for large shelters) | Mine Safety Appliance Co., Callery, Pa. | 1. Provides $O_2$<br>2. Absorbs $CO_2$<br>3. Removes some odors | Uses Chemacon canisters | 24x19x30 | $2,000 | 12 |

per cent be likely to be dangerous in terms of starting fires within the shelter. Thus if the actual oxygen concentration within the shelter ranges between 14 per cent and 40 per cent for the duration of a firestorm, one may anticipate survival of all the occupants without harmful effect.

The oxygen reducing valves generally come with a flow meter. The valve may be adjusted so that the amount of oxygen being liberated into the shelter as measured by the flow meter is sufficient to provide one cubic foot per person per hour. This may have to be translated to liters of oxygen since most flow meters are calibrated in liters. There are approximately seven and one-half liters per cubic foot. Therefore the oxygen requirement per person would be seven and one-half liters per hour and for a family of six in a shelter this totals approximately 45 liters of oxygen per hour. If the flow meter is calibrated in liters per minute the problem may be handled by allowing the oxygen to flow from the cylinder into the shelter for one minute every ten minutes. During the one minute of oxygen flow the rate should be approximately eight liters per minute. A simple way to handle the problem is to set up a schedule so that oxygen is released into the shelter for one minute at the hour, ten minutes after, twenty minutes after, thirty minutes after, forty minutes after, etc. If anyone experiences difficulty in breathing, an additional minute of oxygen flow can be allowed.

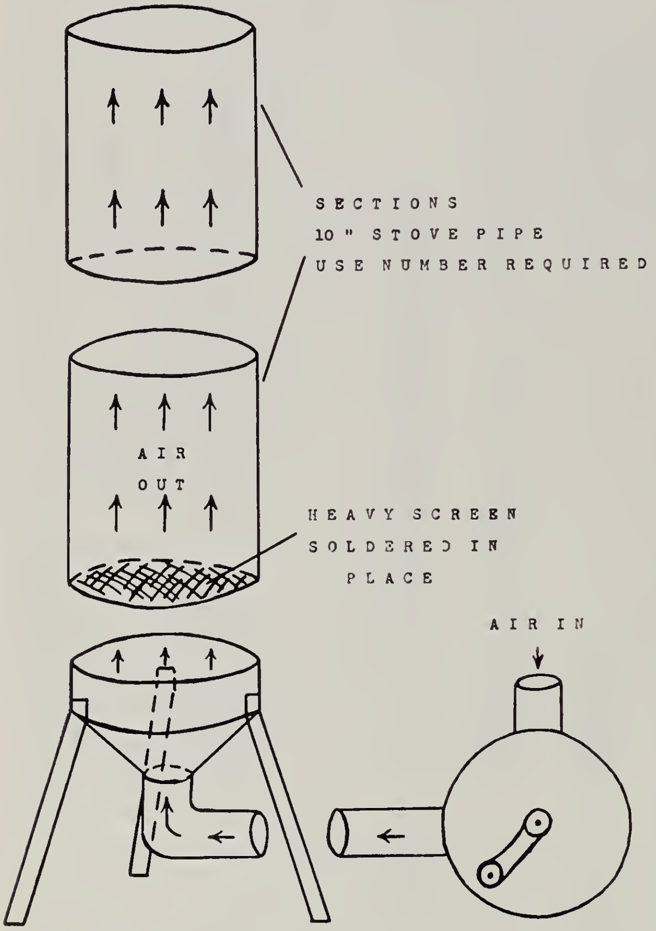

**Fig. 1. A canister for carbon dioxide absorbant may be made.**

These rates of flow may seem quite small to those who have had experience with oxygen tents and masks where relatively high flow rates are used for a single patient. The reason is that masks and tents are quite inefficient in terms of holding in the oxygen and most of the gas is lost to the outside atmosphere. Furthermore in the oxygen mask or tent an attempt is made to keep high concentrations of oxygen available and this multiplies the inefficiency of that process.

In a community shelter or neighborhood shelter the cost of oxygen per person becomes less because a single reducing valve is all that is needed for several oxygen tanks. As soon as one tank is empty, the valve is moved to another tank. In calculating oxygen needs in a large shelter it is advisable to plan on a 220 cubic foot capacity oxygen cylinder for every 18 persons and one reducing valve for every four cylinders. Of course many community and neighborhood shelters will not require protection against firestorm because they will be sufficiently far away from large masses of cumbustible material.

Oxygen may also be provided by certain chemical means. There are at least two chemicals, sodium superoxide and potassium tetroxide, which not only liberate substantial amounts of oxygen but absorb large quantities of carbon dioxide. They will be discussed later.

*Carbon Dioxide Absorption.*—In an enclosed shelter which is to be sealed against firestorm carbon dioxide absorption can be accomplished by chemical means. There are several chemicals which have been tested and used for this purpose and found quite satisfactory. They are listed in table 1. At this time I know of no commercially available canisters which could be used to hold these chemicals. However, a satisfactory canister can be made in a local sheet metal shop and then filled with the appropriate amount of one of the carbon dioxide absorbing chemicals. A drawing of a useful type of canister design is shown in figure 1. There must be some force exerted in order to circulate the shelter air through the canister containing the carbon dioxide absorbent. This is provided by the hand-operated blower. The latter must be disconnected from the air intake of the shelter if it is to be used to pump shelter air through the carbon dioxide absorbing canister. When the hand-operated blower is disconnected temporarily from the air intake pipe of the shelter, the latter should be securely sealed to prevent carbon monoxide leakage downward from the firestorm.

The hand-operated blower may be used intermittently to pump shelter air through the carbon dioxide absorbent either on a time schedule or in accordance with the comfort of the shelter occupants. Although a lack of oxygen does not necessarily cause warning symptoms in everyone before a dangerous level is reached, a surplus of carbon dioxide will cause such warning symptoms quite early. They include rapid respirations, deep breathing and a feeling of stuffiness. Therefore the comfort of the occupants of the shelter can be a useful guide to the need of pumping shelter air through the absorbent. On the other hand, there is no particular harm if such pumping is done on an almost continuous basis. The occupants of the shelter can tolerate carbon dioxide levels between 0 per cent and 3 per cent with no ill effects.

*Combined Oxygen Supply—Carbon Dioxide Absorbing Systems.*—As mentioned there are at least two materials which will provide oxygen in substantial amounts and at the same time absorb carbon dioxide—sodium superoxide and potassium tetroxide. It has been reported that one pound of sodium superoxide will liberate 3.9 cubic feet of oxygen and absorb approximately 2.9 cubic feet of carbon dioxide. Thus approximately 0.3 pounds of sodium superoxide would provide the oxygen needed and absorb the carbon dioxide liberated by one man in one hour. Potassium tetroxide is slightly less efficient. One pound of this chemical will liberate approximately 3.3 cubic feet of oxygen and absorb approximately 2.3 cubic feet of carbon dioxide. About 0.4 pounds of potassium tetroxide would be needed to supply the oxygen and absorb the carbon dioxide liberated by one person for one hour. Thus if these chemicals could be used in the shelter it would require about four pounds of sodium superoxide or five pounds of potassium tetroxide for each person.

At this time I know of only one commercial source of a complete unit (table 1). This unit contains the appropriate chemicals in a completely sealed canister which only needs to be attached to a hand-operated blower to provide the oxygen and absorb the carbon dioxide for a family of five in a shelter during the probable duration of a firestorm (fig. 2). Unfortunately the price of this device ($150) is still quite high. However, it is possible that an increased demand for the item will result in lower prices.

*Prevention of Burns.*—The burns which will be produced after a thermonuclear attack will involve a phenomenon which has not been commonly encountered. In most cases when people are severely burned in peacetime the cause has been either direct heat application by means of boiling liquid or by flames. Following a thermonuclear attack, however, there will be a large number of burns due to direct radiation from the fireball. These burns can, in theory, be caused as far as 20 miles from the center of detonation of a 20 megaton bomb. However there are certain limitations to the radiant energy from the thermonuclear weapon. In effect, anything which will stop light will stop the thermal radiation from the fireball almost completely. This includes clothing, particularly white clothing. Several layers of clothing will give almost complete protection from the flash burn. Thus, in a surprise attack people would be burned only on exposed areas of skin. In most cases these burns will be on one side only (unless a reflecting surface is nearby) and such burns will probably not be lethal. The degree of heat radiation needed to produce a burn on human skin is less than the degree needed to make most clothing flame. Therefore clothing is always a protective feature unless, of course, it happens to be made of some extremely inflammable material. In the event that a person is near enough to the fireball so that his clothing catches fire from the heat radiation, it will be

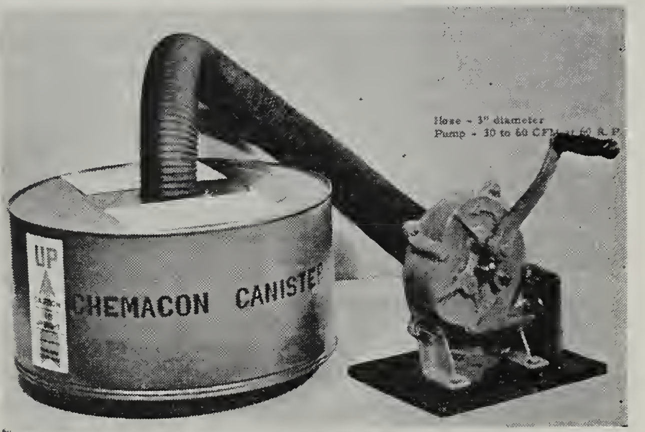

Fig. 2. One method of using a Chemacon canister.

possible to roll on the ground and put out the fire quickly before any great degree of damage is done.

Any structure which is between the person and the fireball will effectively prevent heat radiation burns. This includes buildings and trees. Thus skin burns will be a much greater problem in the open rural and suburban areas than in cities with large tall buildings. It is probable that in such cities as New York, burns from direct fireball radiation would be a relatively minor problem because of the shading effect of all the large buildings.

The only group in the nation subjected to a greater than average risk from these flash burns are children. In warm weather, there is a tendency to leave a substantially larger part of the child's body uncovered than is the case with adults. For example small boys wear short pants rather than slacks and small girls' dresses tend to be rather short. A relatively simple way of guarding against severe or fatal burns in children who may be outdoors when an attack occurs is to dress them so that less skin surface is exposed. This can be done without any great degree of modification of normal procedures. Instead of dressing young boys in short pants let them be clothed in blue jeans, cowboy pants or slacks. Instead of short sleeve shirts, let them wear long sleeve shirts. For little girls let slacks and similar clothing be substituted for short dresses for outside play and let them too wear long sleeved upper garments. A general precaution which would apply to peace as well as possible wartime situations is that clothing for children and adults should be as fire resistant as possible.

There may be some situations in which persons have to go outside at a time when a thermonuclear attack appears imminent. These people can protect themselves from flash burns by wearing clothing which will cover virtually all of the exposed skin.

*Prevention of Blindness.*—As pointed out there is a danger of being blinded from the flash of a thermonuclear weapon at a distance as great as 20 or 25 miles from the point of detonation (assuming a 20 megaton bomb). This risk applies only to those who are looking exactly at the area where the fireball is going to appear. Although this may be a small portion of the number of people in this 20 or 25 mile radius circle, there will be so many people in this area that even the small proportion could involve a large number who might become blind. Accordingly precautionary measures are quite worthwhile and may save many thousands from permanent blindness.

A general precautionary measure is the wearing of hats and caps with rather long brims. A ten gallon hat for example would probably give some degree of protection against blindness in a surprise attack situation.

If there is reason to believe that an attack is imminent and if one must go outdoors or must drive to reach home or shelter area, another maneuver may be used to prevent complete blindness if an attack takes place. Let one eye be covered completely while the other eye is used to see or to drive. This can be done by putting a hand in front of one eye, or by taping or tying a handkerchief in front of the eye. People with eye glasses can tape an opaque material in front of one of the lenses. If this precaution is taken, the worst that could happen in terms of loss of vision would be the loss of sight in one eye. After the fireball has gone (a matter of a few minutes) the good eye may be used to proceed to the shelter. A person with one eye can function readily with almost 100 per cent effectiveness. A person who has lost his sight in both eyes cannot.

The precaution of protecting one eye applies when an attack is known to be imminent. The question may be raised as to what may be done in a surprise attack when no warning is given. It appears now as if a complete surprise attack is unlikely since the government has been developing methods of warning which will give at least five to 10 minutes of advance notice of an impending attack. However, there does remain the possibility that an enemy might evade our detection apparatus and actually succeed with a multiple surprise attack. It will be helpful to keep certain points in mind. If an attack with a large number of thermonuclear weapons is launched, there will be an appreciable time difference between the detonation of each bomb. They cannot be launched in such a way as to explode simultaneously in states as far apart as Florida, Oregon, Maine and Texas. It might be possible for an enemy to coordinate launchings so that all weapons will detonate within a one minute period although even this appears most unlikely. However, there is no conceivable likelihood that all such weapons would detonate within a one second period. Accordingly, the flash of a distant weapon may be considered as warning that another may detonate much nearer. The light from the flash of a weapon 200 miles away would be extremely bright, so that there is no chance for mistaking it for anything else in human experience. The light would take a small fraction of a second to reach the observer. It may be considered a warning of an impending detonation of another bomb nearby. Therefore, persons who are not driving vehicles should close both eyes and put hands over them. If possible, it would also be a good idea to fall flat on the ground. Drivers of vehicles should protect themselves by closing one eye and if possible putting a hand over it while they slow down and look for a safe place to stop. Obviously, this precaution would not protect those who are near the first weapon detonated. It will, however, protect most other people and is, therefore, another device to lessen the dangers of complete blindness from a thermonuclear weapon.

Questions have been raised about the suitability of sunglasses and similar devices for protection against blindness resulting from a thermonuclear detonation. The ordinary sunglasses which are available commercially do not afford a great deal of protection. Scientists who have worked with these bombs use much more effective sunglasses. These, however, are so effective in keeping light out that they cannot be used to move around during daylight. At the present time, there does not appear to be any useful type of sunglasses which would prevent this sort of blindness.

*Prevention of Fires, Firestorms and Other Thermal Effects.*—To a large extent, fires and firestorms can be prevented by relatively simple methods at modest cost. However, the preventive measures needed would have to be taken primarily by the government. One must distinguish between the two major ways in which fires may start as a result of a thermonuclear detonation. One way is through blast destruction of buildings, so that gas lines are severed and burning gas ignites other combustibles. Fires and firestorms originating in this way would be confined to the area of blast damage of a ground or low level detonation. In the case of a 20 megaton bomb, a radius of about 10 miles, or area of 314 square miles could be affected, if the concentration of combustible materials in that area were high enough. Prevention of this type of fire would be a rather difficult matter, involving major changes in the construction of buildings. Such prevention could be part of a long range development plan, but is probably not feasible on a short-term basis. Fortunately, firestorms in the blast damage area are not likely to spread to other areas because the winds blow from the periphery to the center of a firestorm.

The other way in which fires can start following a thermonuclear attack is through ignition of combustible materials on the exterior of buildings, or in dry vegetation by the rays of radiant heat emanating from the fireball as described earlier. The range over which this radiant heat can start fires is much greater than the area of blast damage, and there has been a great deal of concern expressed about these incendiary effects. In the case of a 20 megaton ground burst, fires would be started over a 20 mile range, so that an area of about 1,200 square miles would be affected, in the absence of protective measures. If the 20 megaton bomb were detonated about 15 miles above the earth's surface, the area of ignition might be even greater. The Russian threats about 100 megaton bombs have led some people to state that a single 100 megaton bomb detonating high overhead would produce a firestorm over an area the size of Vermont. This is, of course, a marked exaggeration, since any firestorms would be much more limited in area for reasons which have been discussed. However, in the absence of preventive measures, a stratospheric burst of a 100 megaton bomb could cause multiple fires over an area of about 3,600 square miles. There are, however, preventive measures which could reduce substantially, and perhaps even eliminate, this particular incendiary effect. These preventive measures are based on the characteristics of radiant heat and would have to be activated during the 10 to 15 minute period between a radar warning of enemy missiles on the way and the actual detonation.

Radiant heat is similar to light in many of its physical characteristics, including its speed of travel. It penetrates most materials which light penetrates (for example, glass) and is blocked by materials which block the passage of light rays. If the material blocking the passage of the radiant heat is combustible (wood), the absorbed energy will raise the temperature high enough for a fire to start. However, if the blocking material is not combustible, the radiant heat will not cause fires.

Ordinary clouds can block most of the radiant energy coming from a thermonuclear fireball. Complete blockage is not necessary. If 80 per cent of the radiant energy were blocked by a cloud, the remainder could raise the temperature of most combustible materials to some extent, but not enough to cause ignition, except in areas quite close to the fireball. In effect, a cloud could cancel out completely the incendiary effect of high altitude bursts since there would be no combustible materials within five miles of the fireball. In the case of ground bursts, a barrier near the ground equivalent to a cloud could prevent ignitions outside the zone of blast damage.

To some extent, cloud cover will be available to reduce the incendiary effect of high altitude bursts since about 40 per cent of the United States is covered by clouds at any given moment. This protection could readily be improved by the use of appropriate types of smoke screens.

Smoke of any sort will provide excellent protection against incendiary effects of radiant heat from the fireball. A rough rule of thumb would be that any smoke (or cloud) which is able to obscure the sun would also be able to prevent ignition of virtually all combustibles outside the zone of blast damage (where fires would start from other causes anyway). In principle, it would be practical to produce a smoke screen during the 10 to 15 minute grace period, which would protect from radiant heat all urban and suburban areas, and some rural areas. To accomplish this, a system of smoke generators or effusers would be needed, on the roofs of appropriate buildings, tied in to the emergency alarm system. Then, if an alarm is sent that enemy missiles are on the way, the smoke generators and effusers would automatically release smoke with a specific gravity designed to keep most of it hovering just over roof height. If enough equipment of this sort were available, winds would make little difference, since the wind blowing away from one area would also be bringing smoke in from another area.

The U. S. Armed Forces have already developed highly efficient, nontoxic smokes which were used to screen and protect troops in combat without the need for gas masks. Such smokes can readily be adopted to civil defense purposes. Naturally, there will be some technical problems to be solved, such as the choice of the most effective specific gravity, the effects of temperature changes and the optimum height of release of the smoke. Ideally, the smoke should hover at rooftop level or above, so that ground level visibility is adequate. However, these appear to be well within the capability of American technical personnel. Unfortunately, some of the key information in this area is classified and not available for civil defense planning. However, some estimates can be made with a good probability of accuracy.

The costs of such a program would probably be quite reasonable. The smoke would be released only when enemy missiles had already been launched, identified by radar and found to be aimed in a certain direction. A rough estimate can be given of the probable cost of protecting cities and suburban areas from fire by this means. Assuming that reasonable economies are practiced in designing and purchasing the materials, and that reasonable good sense is used in emplacing them, it should be possible to provide this protection for 350 million dollars, exclusive of the cost of warning system.

A protective system of this type for urban and suburban areas can be supplemented by similar devices for rural areas. Each farmer could be allocated a number of smoke effusers for screening of his house and barn. Drifting smoke from these effusers would also help reduce greatly the incendiary effects on crops.

Municipalities which are subject to a greater than average risk because of nearby missile sites might wish to supplement the federal smoke effusers with some of their own.

In addition to preventing firestorms, a system of smoke screens would prevent most cases of burns and blindness which might otherwise occur in a thermonuclear war. The total cost of this aspect of an adequate civil defense program would probably be quite reasonable.

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Donald M. Dowell, M.D.

# President's Message

A little more than a month remains before the general election in November. Several states were having their primaries just as this issue is going to press, but Missouri primaries have been over long enough that now the attitude of candidates should be known by each member. And this month should be used to pass on this information to family, friends and patients.

A "get out the vote" campaign is time worn, but to "get out the right vote" can be and should be the aim of every member. As I have stressed before, no organization can take the place of the individual and the possibilities he has through his daily contacts to explain the issues that the public, not just medicine, are facing. The physician knows more about the issues directly concerned with medicine, but he is also working toward the maintaining of a free enterprise in this country.

Let's get out the right vote.

D. M. Dowell, M.D.

# EDITORIALS

## UNKINKING THAT TWIST IN THE TALE OF A HOG

The September issue of *Medicine at Work*, under this title, carried the following editorial:

"In impressing millions of minds, the big mistake can vie any day with the big lie. One such big mistake is cited in a recent issue of *Commentary*, which related a story of hogs and humans—and how the tale took a turn which became a twist.

"Scene One: In a U. S. Senate hearing room early this year, a Cabinet officer tells an investigating committee that people should receive the same protection against the marketing of worthless drugs as do hogs. Headlines scream. Editorials take up the call for remedy. The statement is believed.

"Scene Two: At the White House, a message being sent to Congress for drug law reform again brings that pig to market. More headlines. More editorials. Reinforced belief.

"Scene Three: In a packed Madison Square Garden, the tale is revived of the hog whose health is better protected than that of the human. Who can doubt it now among the millions of television viewers? Meanwhile. . . .

"Backstage: In a law library, Federal Acts of 1913, 1938 and 1944 are reviewed. Are animals protected against bad drugs while humans are not? The facts are otherwise. No big headlines. No big editorials. No Administration broadcast to straighten out the tale of the hog.

"It is true that for animals the 1913 Act prohibits the sale of 'worthless' biological products, and that the word 'worthless' is not used in corresponding legislation relating to medicines for man. But it is equally true, *Commentary* points out, that the 1944 Act affords human beings every bit as strong protection by requiring biological products to 'effect a given result'; thus they cannot be worthless. With respect to nonbiological medicines, animals and humans are protected to the identical extent—by the Food, Drug and Cosmetic Act of 1938.

"'Obviously, then', *Commentary* concludes, 'hogs do not receive greater protection than humans. This is the fact of the matter. The prescription drug industry is a complicated and technical one. Even highly placed government spokesmen get the facts about it twisted a bit. When a fact pertains to such a vital question as the public health, it is important to keep the record straight."

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## TWO THIRDS OF MISSOURIANS ARE COVERED BY HEALTH INSURANCE

More than two thirds of the population of Missouri are covered by some form of voluntary health insurance, the Health Insurance Institute reported late in August.

The report stated that at the end of 1961 the State of New York had a coverage figure of 90.7 per cent based on more than 15.5 million insured residents, leading all 50 states. New York was followed by Rhode Island with 87.8, Pennsylvania with 87.7, Ohio with 85.0, Connecticut with 84.0, Illinois with 82.9.

The Institute listed the states with more than two thirds of the population covered by health insurance as California, Colorado, Delaware, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, North Carolina, North Dakota, Oklahoma, Oregon, Tennessee, Utah, Vermont, Washington, West Virginia, Wisconsin and Wyoming.

In addition, the coverage figures for 16 states fell between half and two thirds of population. Only three states—Alaska, New Mexico and Mississippi—had less than 50 per cent coverage, with Alaska the lowest at 37.1 per cent.

On a regional basis, the nine Northeast states of New York, New Jersey, Pennsylvania, Connecticut, Massachusetts, Rhode Island, Vermont, New Hampshire and Maine boasted the greatest percentage of population with health insurance, 84.6 per cent based on 38.5 million insured persons in the region's 45.5 million population.

The Midwest followed with 78.7 per cent coverage based on 41.3 million persons with health insurance out of 52.6 million population in the 12 regional states of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas.

The West ranked third with 67.8 per cent. Approximately 19½ million persons have insurance out of the nearly 28.7 million persons living in the states of Montana, Idaho, Wyoming, Utah, Colorado, Nevada, New Mexico, Arizona, Washington, Oregon, California, Alaska and Hawaii.

# Ramblings of the Field Secretary

Another successful Athletic Injury Conference was held at the St. Louis Medical Society Auditorium, Sunday, August 26. The Conference was sponsored by the St. Louis Medical Society in cooperation with the St. Louis Public High Schools, St. Louis Lutheran High Schools, St. Louis Archdiocesan High Schools, Central States Officials Association, Missouri High School Activities Association and the public and private schools of St. Louis County. The stated purpose of the conference was to emphasize the protective procedures which should be followed by the schools to the end that every athlete should have the best possible protection for sports participation. Safer sports participation should be one of the goals of every school program of athletics.

The panel of Drs. Funsch, London, Smolik and Lane was moderated by Dr. Middleman.

The audience listened in comfort.

Invitations were extended to coaches, athletic directors, faculty managers, school administrators, physical education and health education teachers, physicians and others interested in the prevention and treatment of athletic injuries.

More than 200 attended, including a good number of physicians. The program proper ran from 8:30 a.m. until noon. Included in the presentations were: Bob Bauman, Trainer, St. Louis Cardinals and St. Louis University Billikens, who discussed "Rehabilitation of the Pitching Arm"; Bruce Melin, Trainer, Washington University Bears, speaking on and demonstrating "Prophylactic and Therapeutic Uses of Adhesive Tape"; Jay Bender, Ph.D., Professor of Research Physiology, Department of Physical Education, Southern Illinois University, who discussed "The New Concept and Value of Isometric Exercises," followed by demonstrations of technic; and a panel discussion on "Athletic Injuries Recognition and Treatment."

The able panel moderator was I. C. Middleman, M.D., St. Louis, surgeon, and Team Physician for the St. Louis Cardinals. Members of the panel, all of St. Louis, were Robert E. Funsch, M.D., orthopedist; Edmund A. Smolik, M.D., neurosurgeon; S. L. London, M.D., surgeon and team physician for the St. Louis Hawks; Clinton W. Lane, M.D., dermatologist. Following formal talks by each panel member a question and answer period brought forth many questions from the audience which were effectively answered by the panel.

Brunch was served in the banquet room.

At the termination of the program at noon, brunch was served through the courtesy of the St. Louis Medical Society. As the final climax to the occasion all those present were invited to be guests of the St. Louis Cardinals for the doubleheader with the Pittsburgh Pirates that afternoon at "beautiful Busch Stadium."

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# Missouri Medical News

Cited for his work with the First United Palsy Association of Greater Kansas City, **Robert H. Fitzgerald**, M.D., Independence, was presented the Tommy Citation Award.

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Among faculty members of the annual postgraduate course in "Clinical Cardiopulmonary Physiology" of the American College of Chest Physicians to be held in Chicago October 22 to 26 is **H. Mitchell Perry Jr.**, M.D., St. Louis.

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New full time city health inspector and physician for North Kansas City is **O. S. Pate**, M.D., North Kansas City. He began his duties on August 1.

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Among speakers who will appear on the scientific session of the American Cancer Society to be held in New York City October 22 and 23 is **Wendell G. Scott**, M.D., St. Louis.

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The Platte County Republican Club had as speaker at its July meeting in Parkville, **H. C. Thurman**, M.D., Parkville, who spoke on the King-Anderson bill.

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Among Missouri physicians who will appear on the program of the Fall Clinical Conference of the Kansas City Southwest Clinical Society at Kansas City on October 1, 2 and 3, are **William J. Harrington**, M.D., and **Francis J. Burns**, M.D., St. Louis, and **Donald A. B. Lindberg**, M.D., and **Ian M. Thompson**, M.D., Columbia.

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Speaker at a meeting of District 14 of the Missouri State Nurses Association held in August at Chillicothe was **W. L. Fair**, M.D., Chillicothe.

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At a joint meeting of the mental health associations of Washington, Jefferson and St. Francois counties held at Farmington late in August, **George A. Ulett**, M.D., Jefferson City, was principal speaker.

## DEATHS

**Barber, John J.**, M.D., Corrigan, Texas, a graduate of Keokuk Medical College of Keokuk, Iowa, 1895; member of Greene County Medical Society; aged 93; died July 4, 1962.

**Davis, Myron W.**, M.D., 7445 Stratford St., University City, a graduate of Washington University, 1925; member of St. Louis Medical Society; aged 63; died July 28, 1962.

**Calvert, Lewis C.**, M.D., Weston, a graduate of Jefferson Medical College, 1908; member of Platte County Medical Society; aged 78; died August 1, 1962.

**Conover, Charles C.**, M.D., 5930 Oakwood Road, Shawnee Mission, Kansas, a graduate of Missouri State University, 1901; member of Jackson County Medical Society; aged 91; died August 23, 1962.

**Jennett, Harry N.**, M.D., 2701 Forest Ave., Kansas City, a graduate of the University of Kansas, 1900; member of Jackson County Medical Society; aged 93; died August 23, 1962.

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## NEW MEMBERS

**David L. Beato**, M.D., 4149 Cleveland Ave., St. Louis, has become a member of the St. Louis Medical Society. Dr. Beato is a native of New York, received his preliminary education at St. Bonaventure University in New Orleans, and his M.D. degree at St. Louis University in 1956.

**Gerald J. Duling**, M.D., 207 N. 5th St., St. Charles, has become a member of the Lincoln-St. Charles Medical Society. Dr. Duling is a native of Ohio, received his preliminary education at Xavier College, and his M.D. degree at St. Louis University in 1959.

**William D. Hoadley**, M.D., 6400 Prospect Ave., Kansas City, has become a member of the Jackson County Medical Society. Dr. Hoadley is a native of Kansas, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1956.

**Paul W. Scokel III**, M.D., 207 N. 5th St., St. Charles, has become a member of the Lincoln-St. Charles Medical Society. Dr. Scokel is a native of Alabama, received his preliminary education at Birmingham Southern College, and his M.D. degree at the University of Alabama in 1954.

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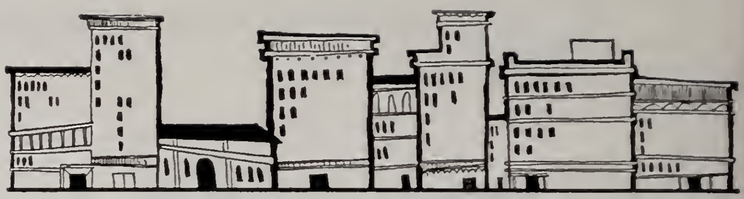
# From the Medical Schools



## WASHINGTON UNIVERSITY

### New Professor Named

Dr. Richard M. Krause has been appointed professor of epidemiology in the department of preventive medicine and associate professor of medicine at Washington University School of Medicine. Dr. Krause received his M.D. degree from Western Reserve School of Medicine. He took two years postgraduate training at Barnes Hospital before joining the staff of the Rockefeller Institute in 1954. He was appointed associate professor there in 1961. He is an associate member of the Armed Forces Epidemiological Board Commission of Streptococcal and Staphylococcal Disease and a member of the research study committee of the American Heart Association's Council on Rheumatic Fever and Congenital Heart Disease. The appointment is effective immediately.

### Symposium Planned

A Symposium on the Biochemical Aspects of Hormone Action will be presented October 12 jointly by The Jewish Hospital of Saint Louis, St. Louis University School of Medicine and Washington University School of Medicine. The symposium will be held in Steinberg Auditorium of Jewish Hospital and is open to the medical public. Ten guest speakers from medical schools across the country will participate.

Dr. Edward W. Dempsey, dean of the School of Medicine, will introduce the speakers. Dr. William H. Daughaday, associate professor of medicine, and Dr. Albert B. Eisenstein, associate professor of medicine and of preventive medicine, will act as chairman of the morning and afternoon sessions. This is the third year that the three institutions have jointly presented a symposium.

### Meetings

Dr. Carl V. Moore, Busch professor and head of the department of medicine, spoke at the fifth Annual Medical Progress Assembly held in Birmingham in late September. His topic was "The Concept of Relative Bone Marrow Failure and Its Importance in the Understanding of Anemias." Dr. Moore was recently named an honorary editor of the new American and Internation Library of Science, Technology and Engineering with headquarters in London.

Dr. John E. Kirk, associate professor of medicine and director of research in the division of gerontology, participated in the second European Conference on Microcirculation held in Pavia, Italy, in September. He discussed his work in the biochemistry of atherosclerosis.

Dr. Paul E. Lacy, Mallinckrodt professor and head of the department of pathology, is scheduled to participate in a symposium sponsored by the American Diabetes Association in Philadelphia, October 11 and 12. The symposium topic is cellular metabolism in relation to cell structure.

The eighth annual institute for Professors of Psychiatry West of the Mississippi was held in St. Louis in September with members of the department of psychiatry and neurology participating. Among speakers for the day's program were Dr. Edwin F. Gildea, Renard professor and head of the department of psychiatry, and Dr. Eli Robins, professor of psychiatry. Topic for the meeting was recruitment and training of students and residents in psychiatric research.

### Grants

Dr. William J. Harrington, associate professor of medicine, has been awarded a $16,581 grant by the state division of the American Cancer Society for study of leukemias and lymphomas. Washington University also received a $40,000 grant from the society to be administered by an institutional research grant committee headed by Dr. Edward H. Reinhard, professor of medicine.

Dr. Oliver H. Lowry, professor and head of the department of pharmacology, has received two grants from the American Cancer Society for a research project scheduled to run five years. The grants total $96,506. A $68,103 grant is for his investigation of "The Cytochemistry of the Nervous System." The other grant of $28,403 is to expedite research in the first year of the project.

The School of Medicine has received a $105,000 grant from the March of Dimes Foundation

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to continue support of the school's rehabilitation teaching program. The grant will cover a three and one half year period.

The Muriel Zweig Leukemia Research Fund has given $650 to the department of medicine for research. The money is raised by friends and relatives of the late Mrs. Zweig who died two years ago of the disease.

### Student Awards

George Eagleton, senior student from Tekamah, Neb., will spend this year in England doing research at the University of Liverpool in pathology. Eagleton's research is being sponsored by a U. S. Public Health Service grant. He will return to St. Louis in the fall of 1963 and complete his senior year.

Eight students have received Jackson Johnson Regional Scholarships for the coming year. The Scholarship fund was established in 1930 when $250,000 was bequeathed to the School of Medicine under the will of the late Jackson Johnson, former president of International Shoe Company. The scholarships will go to Kirby L. Allen, Kirkwood, Mo.; H. Michael Jones, Winters, Texas; Donald T. Siebert Jr., Muskogee, Okla.; Robert D. Shay, Berkeley, Calif.; John P. Murray Jr., Oak Ridge, Tenn.; Charles Robertson, Mountain Home, Idaho; Anne Kathryn Pelizzoni, Tulsa, Okla., and Morris Pulliam, Boonville, Mo.

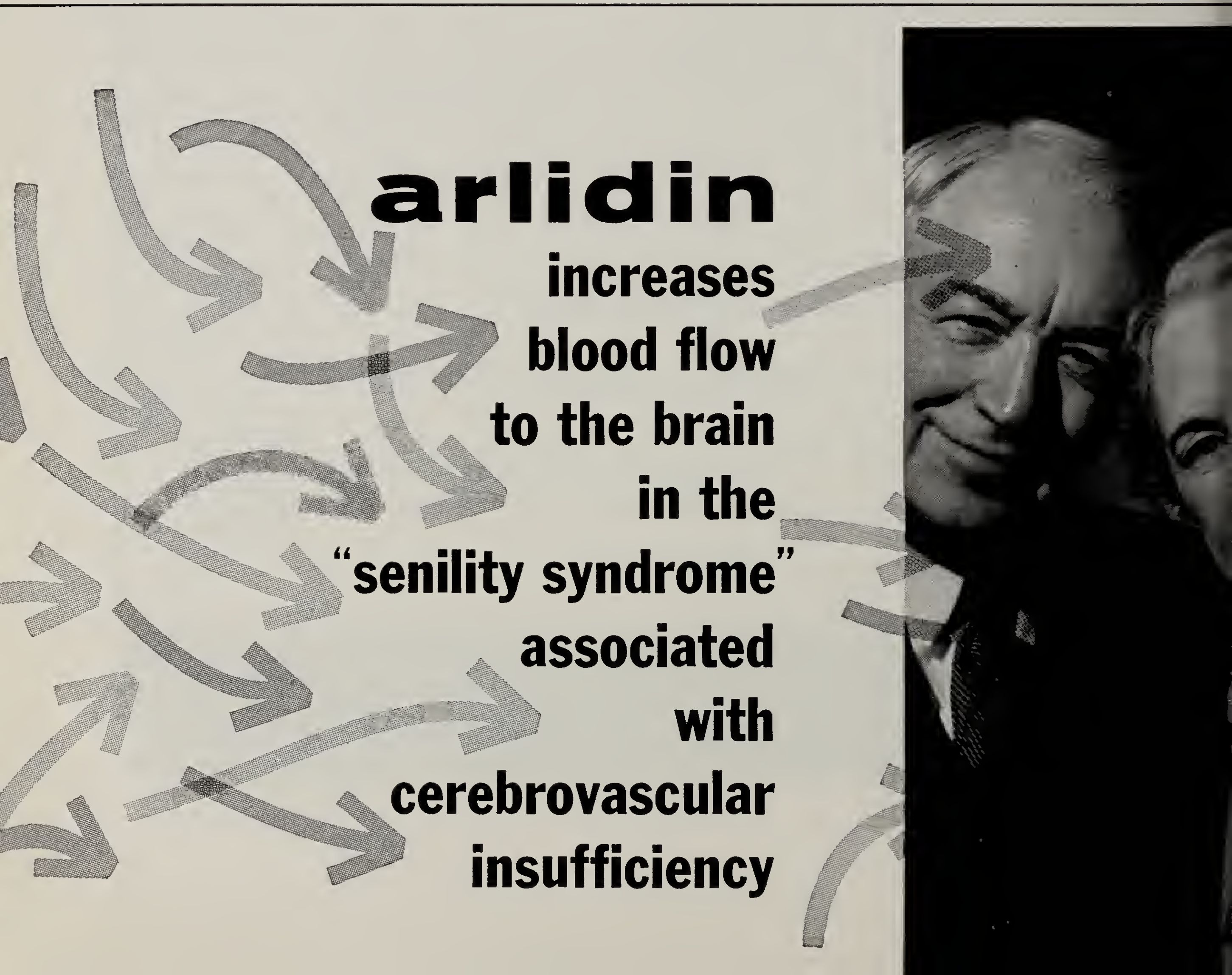
## UNIVERSITY OF MISSOURI

### Meetings to Be Held

A series of two day Postgraduate Cancer Demonstration Clinics for physicians will be presented again by the University of Missouri School of Medicine and the Ellis Fischel State Cancer Hospital, Columbia, during the 1962-63 academic year, it has been announced by Dean Vernon E. Wilson, M.D., of the School of Medicine. The clinics, which were first held in 1961-62, are supported by the U. S. Public Health Service.

The first demonstration in the coming series was held Sept. 12-13. Others, at monthly intervals, will be held Oct. 10-11; Nov. 14-15; Dec. 12-13; Jan. 9-10; Feb. 13-14; March 13-14; and April 10-11.

Dean Wilson said the clinics are intended to assist physicians in increasing their competency in the use of technics for the diagnosis of cancer, and they will provide an opportunity for par-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increases blood flow to the brain in the "senility syndrome" associated with cerebrovascular insufficiency

ticipants to examine patients while studying detection technics. The programs will be under the supervision of John J. Modlin, M.D., professor and chairman of the department of surgery. They are being sponsored by the School of Medicine and the University Extension Division in cooperation with the U. S. Public Health Service.

Sessions will be held at the University Medical Center and Ellis Fischel Hospital. Each two-day demonstration clinic in the series of eight will cover the same field. The activities to be included in each demonstration clinic are tumor conference; ward rounds; cancer of the skin, including outpatient skin cancer patients and technics of skin cancer biopsy and surgical excision; diagnosis of cancer of the larynx and nasopharynx; technics of diagnosis of cancer of the breast; surgical and radiotherapy services at Ellis Fischel State Cancer Hospital; technics of cytologic diagnosis of cancer of the cervix and uterus; diagnosis of cancer of the colon and rectum; and tumors of the eye.

Each clinic is acceptable for 15 hours of Category I credit by the American Academy of General Practice.

Information concerning the series of clinics is available from the Executive Director, Postgraduate Medical Education, M-176 Medical Center, University of Missouri.

### New Appointments

William G. Hemenway, M.D., has been appointed associate professor of surgery in the School of Medicine, effective Oct. 1. Dr. Hemenway has been instructor, assistant professor and associate professor of surgery in the division of otolaryngology at the University of Chicago in Chicago since 1952.

Phillip C. Anderson, M.D., has been appointed assistant professor of medicine (dematology), effective Dec. 1, 1962. Since 1960 Dr. Anderson has been junior clinical instructor in the department of dermatology at the University of Michigan Medical Center. He became senior clinical instructor there in 1961.

### Talks and Trips

Dr. Fernando Tapia, associate professor of child psychiatry, attended a meeting sponsored by the Kansas City Association General Practice and the Western Missouri Psychiatric Association at the Neurological Hospital in Kansas City, July 29. He gave a comprehensive presentation on "What the General Practitioner Can Do in

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**references:** 1. Madow, L.: Penn. M. J. 62:861, June 1959. 2. Stieglitz, E. J.: Geriatric Medicine, ed. 2, Philadelphia, Saunders, 1949 p. 274. 3. Winsor, T., et al.: Amer. J. Med. Sciences 239:594, May 1960. 4. Eisenberg, S.: ibid, July 1960.

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Cases of a Mentally Retarded Child" at the meeting and participated in a panel and discussed the School Phobic child. Dr. Tapia also attended a meeting in St. Louis sponsored by the School of Social Work at Washington University, July 31 and August 1. Inpatient treatment of disturbed children and adolescents was the topic of discussion.

Dr. Robert E. Froelich, assistant professor of psychiatry, attended a meeting of the executive committee of a council on medical television in New York City on July 20, 1962.

Gwilym S. Lodwick, M.D., professor and chairman of the department of radiology, visited the Kansas City General Hospital July 25, for further discussion of the affiliated program between that hospital and the University of Missouri Medical Center.

Dr. Theodore E. Keats, professor of radiology, attended the meeting of the Postgraduate Medical Assembly of South Texas July 19 to 21, in Houston, Texas. As guest speaker, Dr. Keats presented talks on "Some Innocent, but Potentially Misleading Variations in Cardiac Contour," and "Pediatric Radiology: Variations From the Adult and Some Pitfalls in Diagnosis." He also participated in a panel discussion of "Enuresis."

Dr. Cosmo L. Haun, resident physician in radiology, attended a conference on Data Acquisition and Processing in Biology and Medicine held in Rochester, N. Y. Mr. Walton Smith, computer coordinator for the Medical Center also attended the meeting held July 16 to 18.

Dr. Virgil R. Condon, who joined the staff of the Medical Center last August, has completed his residency training in radiology. He and his family left for Salt Lake City, Utah, where Dr. Condon will replace Dr. John Caffey as radiologist at the Primary Children's Hospital in Salt Lake City.

Dr. Ian M. Thompson, professor of surgery (urology), attended the eighth International Cancer Congress in Moscow, Russia, July 16 to August 14 to present a new surgical technic devised at the University of Missouri for the management of the urinary tract.

Dr. Hugh E. Stephenson Jr., professor of surgery, has returned after a leave of absence as traveling professor of surgery to the British Isles and Ireland. Dr. Stephenson lectured and studied undergraduate surgical teaching in the 31 medical schools of England and Ireland. In addition, he visited cardiac surgical centers in England, Sweden, Finland, Germany and Russia.

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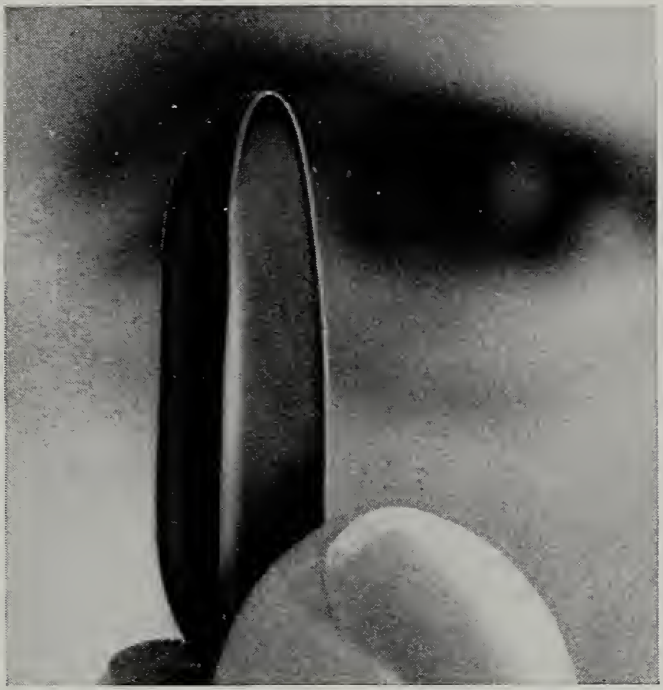

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He presented a paper on "Coronary Arteriovenous Fistulae" at the International Cardiovascular Society meeting in Stockholm, and made visits to Italy, Switzerland, Czechoslovakia, Poland, Norway and France. He also attended the VIIIth International Cancer Congress in Moscow and spent two days at the Cardiac Resuscitation Institute of Professor V. A. Negovskii in Moscow. Dr. Stephenson was abroad three months.

## ST. LOUIS UNIVERSITY

### New Cobalt Laboratory

An Experimental Cobalt Irradiation Source Laboratory designed and constructed by St. Louis University has been established on the University's Medical Center, it has been announced by Dr. G. O. Broun, dean, School of Medicine.

The new facility located at Firmin Desloge Hospital employs 12 hundred curies of radioactive cobalt embedded in a shield of lead and concrete.

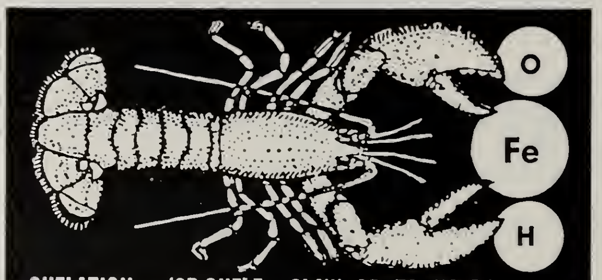
Research investigations utilizing the cobalt facilities will be directed by Dr. George E. Thoma, associate professor of internal medicine and Section Head, Section of Nuclear Medicine. Dr. Thoma also directs the Radioisotopes Laboratory at Firmin Desloge Hospital.

In commenting on the new development, Dr. Thoma said the cobalt unit would facilitate several research studies now underway in the Section of Nuclear Medicine.

One of these is a project supported by a three year contract totaling $63,000 awarded by the U.S.A.F. Aerospace School of Medicine for a study of radiation injury to the blood and blood forming organs. Dr. G. O. Broun Jr., assistant professor of medicine and director of the Hematological Clinic, is the co-investigator in this project.

The investigation will be expanded to include the irradiation of rats utilizing cobalt. Information will be gathered concerning the effects of high doses of radiation delivered in short periods of time. The facility will also be used by Mr. Francis Herbig, radiation physicist, and associates in the Section of Nuclear Medicine for research and development of new methods of measuring doses of radiation.

The Air Force project is being carried out in close cooperation with the Department of Radiological Health at the University of Pittsburgh Graduate School of Public Health and with the



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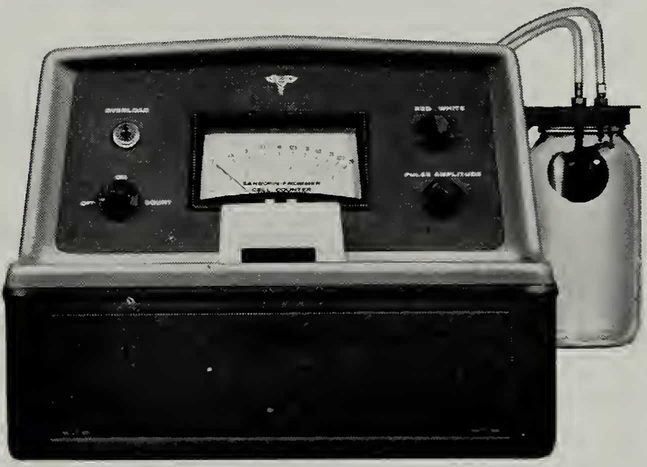

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Health Physics Division of the Oak Ridge National Laboratory, Dr. Thoma said.

Further extension of this project will be developed at Oak Ridge National Laboratory utilizing the fast burst reactor now under construction there as a source of neutron exposure to experimental animals.

In a second research project, the investigators will expand their investigations on the effects of radiation of chromosomes. This work is supported by a three year grant of $34,000 awarded by the National Institutes of Health for a three year period.

Dr. Thoma, who has been a field observer at many atomic and hydrogen bomb tests, said it will be possible to approximate some of these same radiation effects in the new experimental laboratory.

Dr. Thoma is consultant to the Medical Division of Oak Ridge Institute of Nuclear Studies, Health Physics Division of Oak Ridge National Laboratory, U. S. Public Health Service, Division of Radiological Health, Lockheed Aircraft Corporation and the U. S. Army.

### Fulbright Scholar

Dr. William Q. Sturner, pathology resident at the St. Louis University School of Medicine, has been appointed a Fulbright Scholar for the 1962-1963 academic year and began his studies in pathology at Scotland Yard and Guy's Hospital in London September 1.

During his studies in medico-legal pathologic problems, he will perform forensic postmortem examinations, train in toxicologic analysis and investigate the ultimate preparation of criminal cases for jurisdictional appraisal.

A 1959 graduate of the St. Louis University School of Medicine, Dr. Sturner took a straight internship followed by two years of residency training in surgical and clinical pathology. He has studied under Dr. Henry Pinkerton, director of the department of pathology, Dr. John P. Wyatt, associate director, Dr. Drummond H. Bowden, associate professor of pathology, and other professors.

For the last three years, Dr. Sturner has engaged in research projects directed by Dr. George E. Ganter, assistant professor of pathology. One of their studies is directed toward determining how long a person has been dead.

### Special Fellow Award

Dr. Pietro O. Bramante, associate professor of physiology at the St. Louis University School of Medicine began studies at the Drexel Institute

*(Continued on page 1000)*

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of Technology in Philadelphia as a Special Fellow on September 1. The award was from the National Heart Institutes of the National Institutes of Health. On leave of absence from the School of Medicine for one year, Dr. Bramante will engage in studies in biomedical engineering, while pursuing his doctor of philosophy degree in biochemistry.

He is currently investigating the energy exchanges and respiratory metabolic phenomena of albino rats and hamsters in relationship to their endocrine function, especially the thyroid gland. He is also studying the mineral and water content of their body tissues.

### Research Stipends

Stipends totaling $28,800 have been awarded the St. Louis University School of Medicine for the support of 12-week research studies to be conducted by 44 medical students.

The research stipends were awarded by the United States Public Health Service, Lederle Laboratories, Monsanto Chemical Company, Tobacco Industry and the University's Biochemistry Committee on Grants.

The majority of the stipends awarded students in their freshman, sophomore, junior and senior year of study were for $600. The money amounts were made available during the vacation period.

Nine of the recipients were from the Missouri area. They were: Eugene R. Adelmann, Kenneth E. Grant, Stephen Morgan, Michael Orgel, Gerald Orth, Chris Peterson, Allan R. Spivack and John Thomas, all of St. Louis. The other Missouri recipient was Charles T. Bombeck of Kansas City.

These students were selected by the medical faculty on the basis of academic record and aptitude for research. Under the stipends, the students have an opportunity to engage in preclinical investigations as well as in the area of clinical experimental medicine.

Projects are under the direction of medical faculty in the departments of anatomy, biochemistry, internal medicine, neurology, neuro-anatomy, neurosurgery, microbiology, pathology, physiology, psychiatry and surgery.

They involve investigations of cardiac and pulmonary function, viral and bacterial infections, thyroid disorders and excretion of hormones, metabolism in liver disease, the effect of internal radiation and many other subjects.

### New Interns

Forty-one of the 103 June graduates of the St. Louis University School of Medicine began internships at hospitals in the St. Louis area in July. Ten of the graduates are from the St. Louis area.

Twenty of the physicians are taking internships at St. John's Hospital, a University associated hospital. Seven graduates are interning at City Hospital, while four are training at Jewish Hospital.

Physicians interning at the University hospitals will train at Firmin Desloge Hospital, Cardinal Glennon Memorial Hospital for Children, David P. Wohl Memorial Mental Health Institute and St. Mary's Hospital. They are Dr. Dennis R. Charipar, Cedar Rapids, Iowa; Dr. Charles Gautheir, Williston, N. D.; Dr. Alfred J. Grindon, St. Louis; Dr. Willard A. Hauser, Cleveland; Dr. Thomas A. Helmrath, Chicago Heights; Dr. Carl A. Hendricks, Sacramento, Calif.; Dr. Richard J. Hollocher, St. Louis; Dr. Charles L. Hoppel, Selah, Wash.; Dr. David G. Kramp, New York; Dr. Edward J. Miller, St. Louis; Dr. James A. Monteleone, Chicago Heights; Dr. John C. Morris, Piedmont, Calif.; Dr. Aloys M. Rieser Jr., St. Louis; Dr. George C. Robben, St. Louis; Dr. Ronal C. Rosso, Daly City, Calif.; Dr. John R. Scharf, Bronxville, N. Y.; Dr. Norris W. Smith, St. Louis; Dr. Daniel J. Stechschulte, Columbus Grove, Ohio; Dr. Ronald T. Turgeon, Dover, N. H.; and Dr. Daniel P. Waligora, Pacific Grove, Calif.

### Alumni Reunion

Alumni of the St. Louis University School of Medicine are invited to attend annual alumni activities in St. Louis during Founder's Week to be celebrated by St. Louis University October 18 to 22.

Dr. G. O. Broun, dean, St. Louis University School of Medicine, will be host at a Dean's Reception to be held for alumni from 4:00 p.m. to 6:00 p.m. Thursday, October 18 in Miller Hall of Firmin Desloge Hospital, 1325 South Grand Blvd.

A clinical academic program will be held in Miller Hall Friday, October 19, beginning at 9:15 a.m. It will conclude at 12:30 p.m. for the Dean's Luncheon to be held at Firmin Desloge Hospital.

A cocktail and dinner party beginning at 6:00 p.m. will be held that evening at the Three Fountains Restaurant located in Gas Light Square. Invited to attend are classes of 1912, 1917, 1922, 1927, 1932, 1937, 1942, 1947, 1952 and 1957. A play at the Crystal Palace at 8:30 p.m. will follow the dinner party.

An all medical alumni dinner has been set for 6:00 p.m. Saturday, November 20, at Norwood Hills Country Club.

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1. Borota, A., and Grinell, R.N.: J. Amer. Geriatrics Soc., 10:413, 1962.
2. Spoor, H. J.: N.Y. State J.M. 58:3292, 1958.
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LEO H. POLLOCK, M.D.

# Missouri Medicine in Review

## FORTY YEARS AGO

The first meeting of the Missouri State Conference of the Catholic Hospital Association of the United States and Canada was held in St. Louis on September 19 and 20, 1922. More than two hundred Sisters of the various Catholic hospitals throughout the State of Missouri attended. There were present representatives from every one of the twenty-two Catholic hospitals of the state. The morning session of the first day was opened with mass, Rev. M. J. O'Connor, S.J., celebrant. The religious services were followed by addresses of welcome by the following: Rev. M. J. O'Connor, S.J., President, St. Louis University; Rev. Charles Cloud, S.J., Regent, St. Louis University School of Medicine; H. W. Loeb, M.D., Dean, St. Louis University School of Medicine; W. W. Graves, M.D., President, St. Louis Medical Society.

The state chairman of the American Society for the Control of Cancer, Dr. Fred J. Taussig, St. Louis, is anxious this year to institute a state wide campaign reaching every county in Missouri. The figures that have come from the United States census of 1920 show that the cancer death rate is 83.4 per 100,000 population. When compared with 63 per 100,000 in 1900 one must assume that there has been an actual, and not merely an apparent, increase in the spread of cancer. At present the total number of deaths from cancer in persons 30 years of age or over is greater than the number of deaths from tuberculosis.

## TWENTY-FIVE YEARS AGO

Dr. Irvin Abell, Louisville, Ky., President-Elect of the American Medical Association and Clinical Professor of Surgery at the University of Louisville School of Medicine, will be a guest of the Fifth Councilor District at Columbia, October 21. Dr. Abell will present an address on "The Retrodisplacements and Complete Prolapse of the Uterus."

The Board of Managers of the State Cancer Hospital has been appointed by Governor Stark as follows: Dr. Ellis Fischel, St. Louis, Chairman; Mr. Ed. F. Swinney, Kansas City; Mr. Waldo Hold, Louisiana, and Dr. Paul F. Cole, Springfield. The Hospital was authorized by an act of the last session of the Legislature. There was an appropriation of $600,000 for the institution. Among cities desiring location of the hospital are Columbia, Moberly, Jefferson City, Macon, Mexico and Chillicothe.

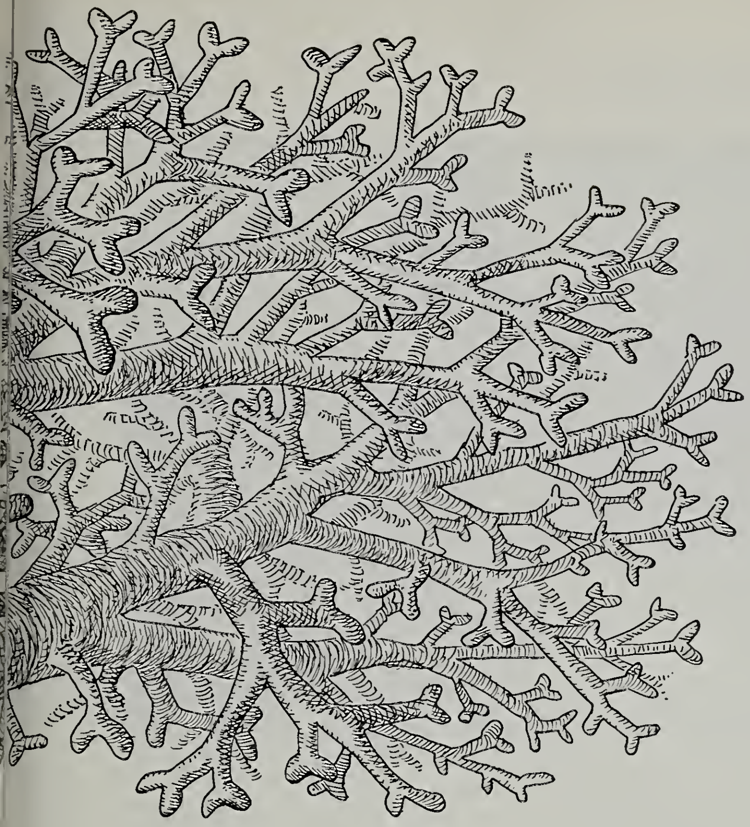
A National Cancer Institute was created as a Division of the United States Public Health Service by the 75th Congress. The bill authorizes an appropriation of $700,000 annually to be utilized in cancer research and provides $750,000 for the erection of a building in which the new cancer activities will be centered. The bill was presented by Senator H. T. Bone of Washington in the Senate and a companion bill in the House was sponsored by Representatives A. L. Bulwinkle of North Carolina and Maury Maverick of Texas.

## TEN YEARS AGO

The next Missouri State Board of Examination will be given in Kansas City on October 24 and 25, the Missouri State Board of Medical Examiners, Jefferson City, announced.

Frank Hurwitt, M.D., Kansas City, has been appointed medical coordinator for the Missouri Civil Defense Agency, Jefferson City.

William H. Olmsted, M.D., St. Louis, has been elected treasurer of the American Diabetes Association and appointed vice chairman of the association's committee on detection and education.



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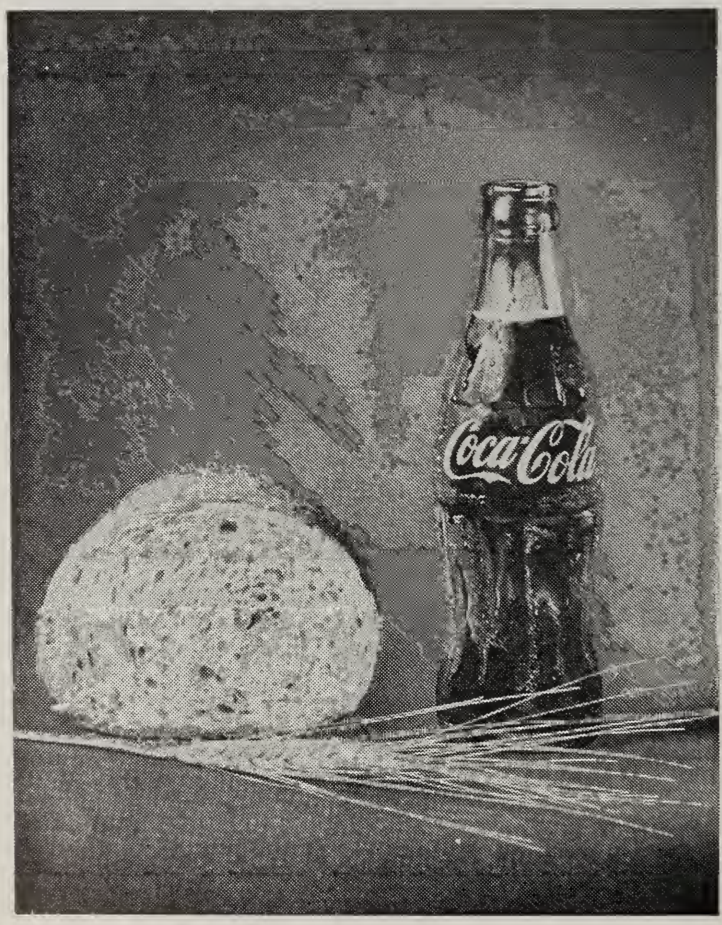
## MISSOURI ACADEMY OF GENERAL PRACTICE

*(Continued from page 944)*

11:00 a.m. Mammography, Don C. Weir, M.D., St. Louis, Professor and Director of Radiology, St. Louis University School of Medicine.
11:20 a.m. Plastic Surgery You Should Tell Your Patient About, Charles E. Horton, M.D., Norfolk.
11:40 a.m. Panel Discussion.
12:30 p.m. Lunch and Exhibits.

### SYMPOSIUM ON PERIPHERAL VASCULAR DISEASE

1:30 p.m. Care of the Limb With an Impaired Circulation, Thomas F. Nealon Jr., M.D., Philadelphia, Associate Professor of Surgery, the Jefferson Medical College of Philadelphia, and Visiting Lecturer in Surgery, Graduate School, University of Pennsylvania.
1:50 p.m. What We Know About the Natural History of Arteriosclerosis in the Extremities, E. A. Hines Jr., M.D., Oteen, N. C., Consultant in Internal Medicine, Veterans Administration Hospital at Oteen and Emeritus Consultant, Mayo Clinic.
2:10 p.m. The Role of Sympathectomy in Peripheral Vascular Disease, K. B. Coldwater, M.D., St. Louis, Formerly Chief of Surgical Service, Veterans Administration Hospital in St. Louis.
2:30 p.m. Intermission to View Exhibits.
3:00 p.m. The Choice of the Patient and the Specific Operation in Surgery for Arterial Disease of the Lower Extremities, Thomas F. Nealon Jr., Philadelphia.
3:20 p.m. Endarterectomy in the Treatment of Peripheral Vascular Occlusions, Carl A. Moyer, M.D., St. Louis, Bixby Professor of Surgery and Head of the Department, Washington University School of Medicine.
3:40 p.m. The Treatment of Arteriospastic Disease, E. A. Hines Jr., M.D., Oteen, N. C.
4:00 p.m. Panel Discussion on Peripheral Vascular Disease.
4:30 p.m. Adjournment.



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## WOMAN'S AUXILIARY

*(Continued from page 946)*

cians, our husbands, who have made possible our Auxiliary. Doctor's Day gives us the opportunity to publicly express our gratitude, and that of the communities in which we live, to these dedicated healers. I think the doctors enjoy this special day when we "fuss" over them.

Fall is a change in the season; a mood; a quiet time of reverie; a burnished leaf rustling to the ground. It is a time to think and plan and take stock. Thus, within ourselves, we are renewed. Our State Fall Conference, always a wonderful reunion, comes this year with the advent of Indian Summer, that moment in our year's calendar after the first nip of frost, when the warmth of the sun is reluctant to leave the hills. It is my favorite time of the year, and perhaps yours too. Let's spend it together.

## CIVIL DEFENSE CONFERENCE

The 11th annual conference of the United States Civil Defense Council will present a program of the Health Services Advisory Committee October 15 to 19 at Knoxville, Tenn. Carroll P. Hungate, M.D., Kansas City, is chairman of the Health Services Advisory Committee.

Carl D. Siegel, M.D., Sedalia, will speak at the conference on "Medical Self-Help Program, Development of State and Local Plans" and Mr. Kenneth D. Mayfield, Jefferson City, Director of Health Mobilization of the Missouri Division of Health, will speak on "Missouri's Health Mobilization Problems."

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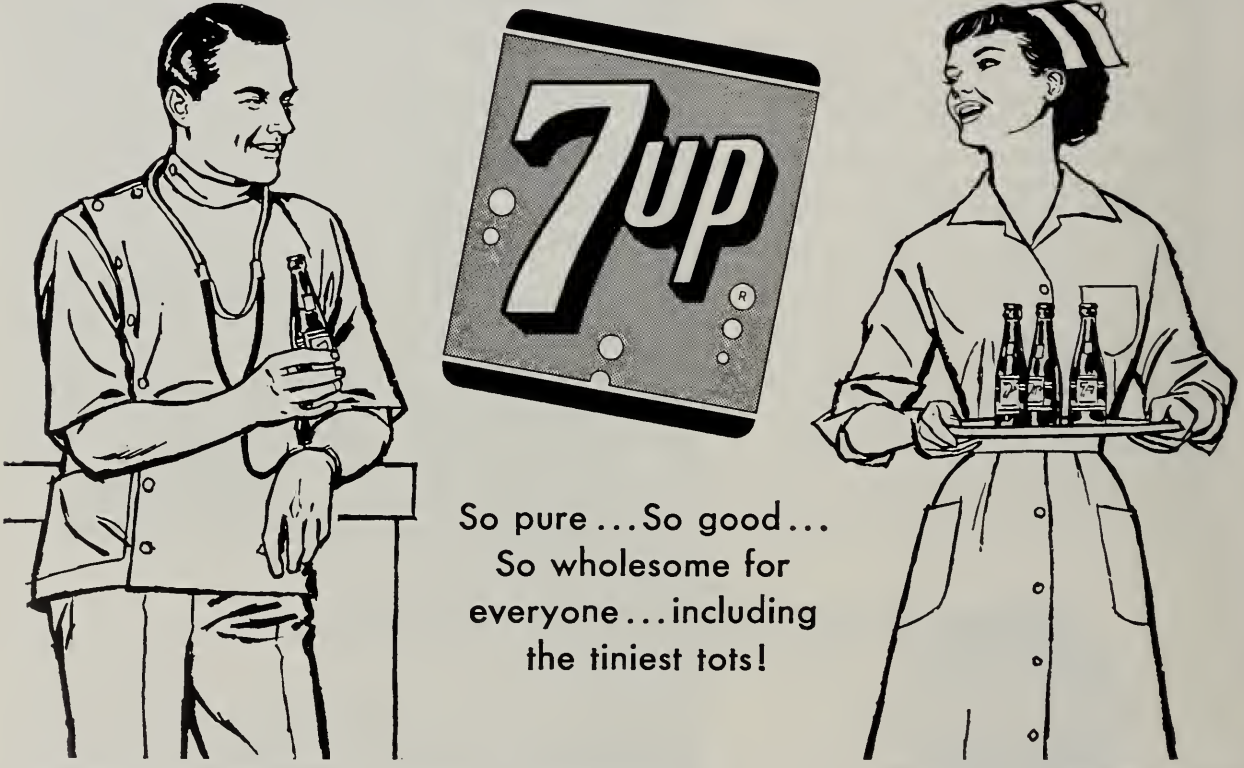

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# Capsule Clinics

- Surgical treatment of hyperthyroidism, when care is taken to exclude patients with cardiac disease, is a safe and effective procedure. Metropol, Harry J., and Myers, Richard T., Arch. Surg. **84**:35, 1962.

- Cerebrovascular accidents may be suspected or diagnosed clinically in most instances by an accurate history, neurologic examination, and an analysis of the spinal fluid. Additional diagnostic procedures will confirm the diagnosis. Bragdon, Floyd H., Pennsylvania M. J. **65**:453, 1962.

- Of 96 adults with a history of vibratory murmurs in childhood, only four had heart disease. Only two cases were even remotely related to the previous murmur. The absence of heart disease in the vast majority of these patients indicates that vibratory systolic murmurs observed in childhood, even though quite loud, are innocuous or "innocent" and not indicative of organic heart disease. Marienfeld, C. J., et al. Pediat. **30**:42, 1962.

- Twenty-eight nurses and nursing assistants found to be nasal carriers of coagulase-positive *Staph. aureus* were treated by spraying the nares and deeper nasal cavities once a day with a solution containing 5 mg. neomycin sulfate per ml. Treatment was discontinued after two negative cultures were obtained. In 32 of 44 courses of treatment the nasal culture became negative after the first spray, in 7 instances after the second, and in 4 instances after the third. Only one remained positive after the fifth spray. Hussar, A. E., Clin. Pharmacol. & Therap. **3**:441, 1962.

- In 1953 Berman et al., reported that talc-induced peritoneal adhesions were inhibited by administration of Histadyl. The present study was undertaken to reassess the influence of Histadyl upon the formation of adhesions in experimental animals. Adhesions occurred in 36 per cent of rats treated with Histadyl before and after experimental trauma. In contrast, similar adhesions occurred in 82 per cent of control animals. If Histadyl has a similar effect in man it should prove a safe method of preventing peritoneal adhesions. Jacqmain, R. J. & Shumacker, H. B. Jr., Am. J. Surg. **104**:20, 1962.

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# WASHINGTON

## FEDERAL INCOME TAX RETURNS MUST INCLUDE NEW NUMBERS

Every person paying federal income taxes, beginning with returns for the tax year 1962, must have and use an "account number."

This is due to the Internal Revenue Service's new automatic data processing system.

IRS recently announced regulations concerning the account numbers and physicians as well as other taxpayers will be interested in how they are assigned.

### Social Security Numbers

To avoid the work of assigning new numbers to about 140 million Americans who have social security numbers, IRS will use these numbers for its ADP system.

However, the case of the self-employed physician is different. His private practice does not come under the Social Security Act, so it is unlikely that he has a social security number, except in instances in which he is or was an "employee."

How will the M.D. who needs an account number obtain it? The IRS regulations say that applications for obtaining account numbers will be furnished "as far as possible" without request during 1962 to taxpayers who need them. Thus, unless furnished with an application, a taxpayer is not required to file an application this year.

If furnished with an application form, however, the taxpayer must fill it in and return it in accordance with the IRS instructions.

After 1962, IRS says, the taxpayer needing an account number must file an application on either Form SS-5 or Form 3227. These may be obtained from any IRS district director or Social Security Administration district office.

### Employer Number

The physician, or any other taxpayer, who is engaged in a business or trade must have and use an "employer identification number" in addition to his personal account number. In general, he is considered as engaged in a trade or business if he is required to file any federal return as an employer (other than a household employer), such as for social security or withholding of employee wages.

The numbers must be used on the appropriate returns. For example, a physician-employer would have to include his account nuumber on his income tax return (or declaration of estimated income) and his employer identification number on Schedule C of Form 1040 (Profit or Loss from Business or Profession).

On a return filed jointly by husband and wife, only the account number of the husband needs to be included in most cases. However, the wife's account number must also be shown if:

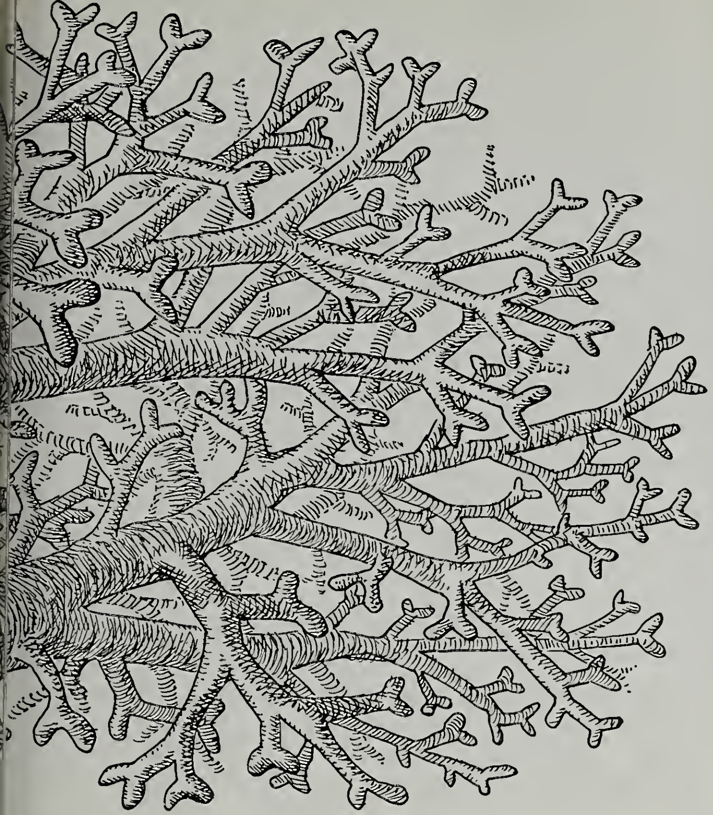
- For the year, the wife had separate gross income of $600 or more (or $1,200 or more if she was 65 or older).
- The wife had self-employment income.
- She received income—wages, dividends or interest—other than with her husband which the payer is required to report.

IRS regulations provide for a penalty of $5.00 for each failure to include the identifying number in any return.

## KEOGH BILL

The Keogh bill, H. R. 10, has been enacted. President Kennedy signed the bill on October 10, just a few hours before it would have become law without his signature. The signing was unexpected by congressional leaders who had thought he would allow it to become law without signing it, and earlier had thought that he might veto the bill. It is estimated that it could benefit as many as 7,000,000 self-employed persons and 11,000,000 of their employees. Proponents of the bill say that doctors and lawyers make up approximately 2 per cent of the persons covered by the bill.

H. R. 10 was passed by the Senate by a vote of 70 to 8 on September 28, following the passage by the House on September 25 by a vote of 361 to 0. The bill, which would permit physicians, attorneys and other self-employed persons to claim a tax deduction on money contributed to their own pension plans, then went to the President. The enactment brought to a climax a 12 year effort to enact H. R. 10 into law. Although the final version has been limited to a maximum tax deduction of $1,250 per person covered, it is recognized as a beginning for this type of legislation.



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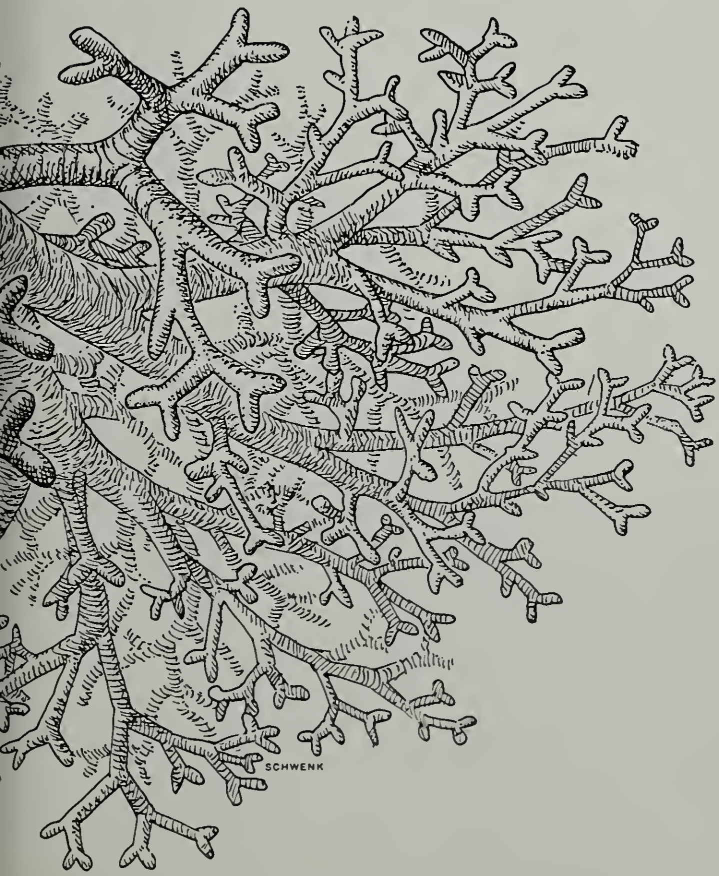

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Across
Missouri

### Medical Self-Help Training Thrives

Approximately 1,300 Missourians were enrolled in 52 courses in medical self-help training by late September, according to Dr. H. M. Hardwicke, Acting Director of the Missouri Division of Health. Twenty-eight courses had been completed at that time. It is planned that in the pilot courses 9,600 Missourians will take the course and, in turn, teach the 16 hour course to other people in Missouri. In describing the course, Dr. Hardwicke said "In nuclear attack it may be days or weeks before a doctor could reach every community or fallout shelter. This program teaches how to care for many of one's own medical problems."

The Medical Self-Help Program is coordinated by the Missouri Division of Health and supported by the State Civil Defense Office, the Missouri State Medical Association, the Missouri Academy of General Practice and other organizations. Field instruction responsibility for the course is assigned to the office of Health Mobilization, headed by Dr. Carl D. Siegel.

To assist in this program Dr. Siegel has assigned a Health Mobilization Program representative to each of the five district health units in the Missouri Division of Health. These units are located at Cameron, Macon, Jefferson City, Poplar Bluff and Springfield. The current success of the Medical Self-Help instruction at county and city level is attributed by Dr. Hardwicke to the cooperation among local organizations, practicing physicians, county public health nurses, civil defense directors and other civic-minded persons. He praised the students, who through training and inclination, will be prepared to teach the course after the pilot phase has been evaluated in the latter part of this year. Also cited were the many physicians who are functioning both as training sponsors and classroom counselors.

Missourians who want this training and will accept teaching assignments should contact the nearest public health nurse, civil defense director, county or city medical society, the nearest Missouri district health office or the Director, Health Mobilization, Missouri Division of Health, Jefferson City.

The 12 lessons taught are: Radioactive Fallout and Shelter; Hygiene, Sanitation and Vermin Control; Water and Food; Shock; Bleeding and Bandaging; Artificial Respiration; Fractures and Splinting; Transportation of the Injured; Burns; Nursing Care of the Sick and Injured; Infant and Child Care, and Emergency Childbirth.

Dr. Hardwicke said that data received up to the time of the report indicated that probably no program connected with Civil Defense, and few in public health, has had such general and favorable comment and acceptance.

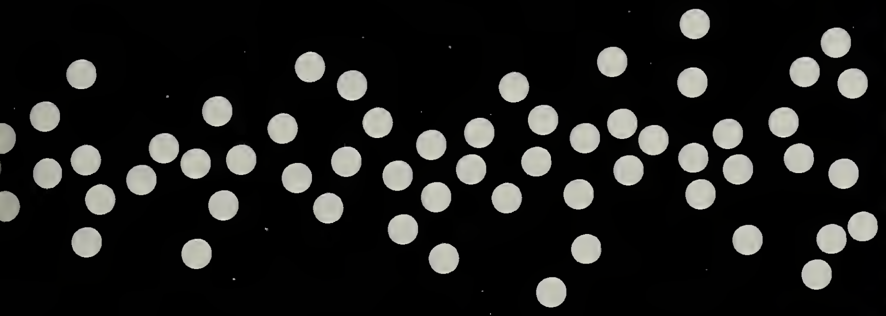
### Use of Oral (Sabin) Polio Vaccine

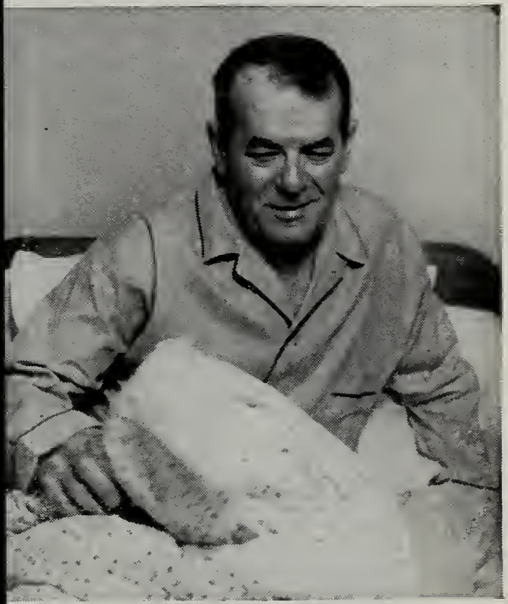
The following informational memorandum was issued on September 18 by H. M. Hardwicke, M.D., Acting Director, Missouri Division of Health:

"On August 15, 1962, I wrote to each of you suggesting that if oral vaccine was to be used in your community, physicians should take the initiative in organizing community-wide programs. The Division of Health still feels that all community programs in the field of health should be initiated and actively supported by practicing physicians.

"I would, however, like to call your attention to evidence which has come to light which casts doubt upon the complete safety of Type III Sabin vaccine. There have occurred in the United States 11 cases of Type III poliomyelitis outside of epidemic areas which had their onsets within 30 days of immunization with live oral polio vaccine, Type III. This is an incidence of approximately one case per million doses. Had we no other polio vaccine, the apparent risks involved would seem to justify the use of live vaccine. We do, however, have the Salk vaccine. The Division of Health is calling this matter to your attention trusting that you will accept our recommendations that Type III Oral

*(Continued on page 1084)*





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**The Upjohn Company, Kalamazoo, Michigan**

# Woman's Auxiliary

What basic concepts of responsibility have been changing in the Mental Health field? What are some new approaches to recruitment for Health Careers? In what manner can members-at-large best fulfill their role in Auxiliary work? How has the stature of women increased in the political picture?

Mrs. J. Martyn Schattyn

These questions and hundreds more are ringing in my ears as I think over the proceedings of the recent National Fall Conference of the Woman's Auxiliary. I found myself wishing with all my heart that Missouri's doctors could have sat in with us on these educational sessions. I wondered if they would have been over-awed as I was at the scope of the work of the Auxiliary. We are thankful that the State Association as a unit stands ready to help us at every turn, and we are grateful for their cooperation and appreciation. But there are still some individuals who look upon the Auxiliary with patronizing tolerance. It is to these that a glimpse into such a meeting of minds would, we believe sincerely, bring understanding.

To have been a part of the Conference is almost like reaching a turning point in one's life. After such an experience nothing is the same any more. Each participant comes away with the feeling that here is what she has been looking for. Conferring with 49 other state presidents and presidents-elect (yes, Hawaii and Alaska were present), with free-swinging discussions and the exchange of ideas, fills one with a heady feeling of exhilarated determination.

We leave bursting with the idea that we simply must follow through with a statewide safety crusade for seat belts and safer street lighting; that by adding International Health Activities to our committees we will give our smaller groups or members-at-large a project that can be tailored to an individual effort; that we must do more than just give a program to our own members on Mental Health. After all, it is the public we wish to inform. We decide, under the enthusiasm of the moment, that our membership committees must try some of the many suggested and interesting methods of gaining new members; and that Civil Defense is more than just deciding on whether or not to construct shelters. The moral issue of survival for the future of our nation should be the foremost consideration. The will to resist the encroachment of foreign ideologies should be strengthened in us so that the righteousness of our cause will rise as a wall of steel.

The needs of the medical profession in the allied health fields spur us into planning more and better careers projects. The need for such personnel seems almost impossible to surmount in the foreseeable future. Our efforts may seem puny, something like trying to move a mountain, but we cannot relax them for the need is pressing and urgent.

The role of the civic-minded Auxiliary member in politics was stressed again and again. Women voters outnumber men by four million, a nice comfortable margin. What are we waiting for? Unity of purpose to preserve our freedoms of speech, press and assembly; the inborn nature of woman to be more economically conservative—to realize that it is disastrous to spend more than the family takes in; her sense of duty to her loved ones: these are factors in woman's makeup to which we can appeal in stressing the need for better local government by more responsible civic-minded leaders. We need people in office who will take the initiative instead of running to the federal feed-box for handouts. After all, who fills that feed-box? The journey our tax dollars take to Washington and back is a mighty expensive round trip. Moreover, these tax dollars come back to us with too many strings attached.

Statewise, Missouri shone at the Conference. Ruth Kelling, Regional Civil Defense chairman; Jane Crispell, president-elect; Jane Wade, newly-appointed to a national committee to implement AMPAC in the north central region; Genevieve Bartlett, National Founder and a most revered Missouri past president; and the incomparable Betty Sutter, National North Central Regional

*(Continued on page 1084)*

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**THEODORE E. KEATS, M.D.,** ***Columbia***

# Plain Film Diagnosis of Congenital Heart Disease

**A format, based upon the clinical determination of the presence or absence of cyanosis and the radiographic examination of the state of the pulmonary vascularity, is presented for an approach to the analysis of plain film findings in congenital heart disease.**

**Dr. Keats is Professor of Radiology, University of Missouri School of Medicine, Columbia.**

On reviewing the contribution of the plain film to the diagnosis of congenital heart disease, it is interesting to compare the pessimistic attitude toward this subject of 10 years ago with the renewed interest demonstrated today. By virtue of experience gained by the use of more complex methods, one can better appreciate the significance of the manifestations of cardiac disease which were heretofore unrecognized in the plain film.

The diagnosis of congenital heart disease by use of the plain film involves several philosophic considerations which are axiomatic. The first of these relates to the importance of the correlation of clinical and roentgen findings. There is probably no area in radiologic diagnosis in which this is more important. The ease with which one can attain an accurate diagnosis or at least narrow his differential diagnosis will correlate with the amount of complimentary information at hand. Necessary data includes the history, physical and laboratory findings, electrocardiogram and, on occasion, the catheterization results.

Secondly, there is considerable variability in the roentgen appearance of a given congenital heart lesion. This variability relates to the degree of severity of the underlying defect and the age of the patient. One should, however, attempt to establish a mental image of the classic form, but must learn also to anticipate some of the variations from this image. With increasing experience, a greater range of these deviations will be appreciated.

The third consideration relates to anatomic versus physiologic diagnosis. Occasionally, one sees a patient with multiple cardiac defects in whom only the lesion producing the greatest physiologic disturbance can be recognized. Similarly, one will see patients whose roentgen findings are not specific, or sufficiently bizarre to make anatomic diagnosis impossible by conventional roentgen means. However, a contribution to the diagnosis can still be made by pointing out the underlying physiologic defect. For example, it may be possible to state that a right-to-left or a left-to-right shunt is present without actually determining the location of the defect. Such a physiologic diagnosis is of help in determining the next appropriate procedure which should be employed to obtain an anatomic diagnosis.

Lastly, one must appreciate the limitations of the method and recognize that eventually a lesion will be encountered which, through its complexity or severity, is beyond diagnosis by conventional means. This applies particularly to patients with multiple lesions or those with lesions which are sufficiently rare that the observer's experience does not permit inclusion into his differential diagnosis. With these, an educated guess will have to suffice, with the suggestion that other methods be utilized.

An orderly approach to the analysis of roentgen findings is essential to the diagnosis of congenital heart lesions and will simplify the problem of differential diagnosis. The schemes most commonly used are based either on the state of vascularity of the lungs or on the presence or absence of cyanosis. Neither of these is infallible for occasionally one sees cyanosis in what is essentially a non-cyanotic heart lesion and, of course, the converse is also true. In addition, the degree of pulmonary vascularity is sometimes extremely difficult to define when it is not extreme. The format presented here is suggested as a useful approach to the analysis of roentgen findings and is based on both the clinical estimation of cyanosis and on the roentgen appearance of the pulmonary vascularity. Only the lesions which are most commonly encountered will be presented and in their typical forms. This discussion will not include the vascular rings.

## CLASSIFICATION OF THE COMMONER CONGENITAL HEART LESIONS

A. Acyanotic

  1. Increased Vascularity
    (a) Patent ductus arteriosus and aortic-pulmonary window.
    (b) Ventricular septal defect.
    (c) Atrial septal defect (secundum type).
    (d) Atrial septal defect (primum type).
    (e) Anomalous pulmonary venous connection.

  2. Decreased Vascularity
    Pure pulmonary stenosis (20 per cent of cases).

  3. Normal Vascularity
    (a) Coarctation of the aorta.
    (b) Congenital aortic stenosis.
    (c) Endocardial fibroelastosis.

B. Cyanotic

  1. Increased Vascularity
    (a) Complete transposition of the great vessels.
    (b) Truncus arteriosus.

  2. Decreased Vascularity
    (a) Tetralogy of Fallot.
    (b) Pulmonic stenosis with atrial septal defect (Trilogy of Fallot).
    (c) Tricuspid atresia.

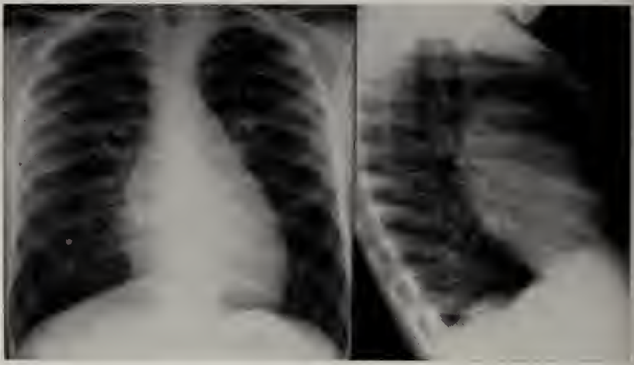


Fig. 1. Acyanotic: Increased Vascularity—Patent ductus arteriosus and aortic-pulmonary window.

A. *Chamber Enlargement*
  Left ventricle.
  Left atrium.

B. *Great Vessels*
  Pulmonary artery large.
  Aorta normal or large.

C. *Pulmonary Vascularity*
  Increased.

D. *Principal Differential Diagnosis*
  Ventricular septal defect. Aorta small in ventricular septal defect.

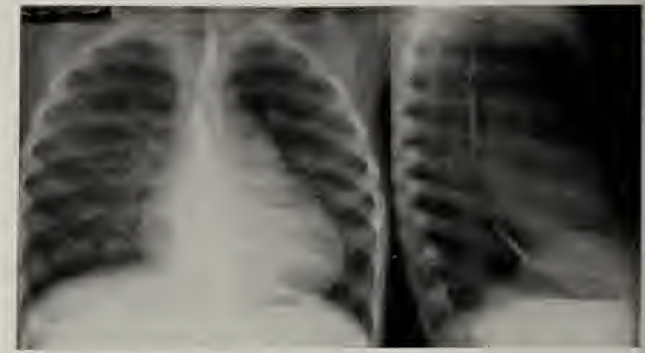


Fig. 2. Acyanotic: Increased Vascularity—Ventricular septal defect.

A. *Chamber Enlargement*
  Right ventricle.
  Left ventricle.
  Left atrium.

B. *Great Vessels*
  Pulmonary artery large.
  Aorta hypoplastic.

C. *Pulmonary Vascularity*
  Increased.

D. *Principal Differential Diagnosis*
  Atrial septal defect—right sided enlargement.
  Patent ductus arteriosus—aortic size normal or large.

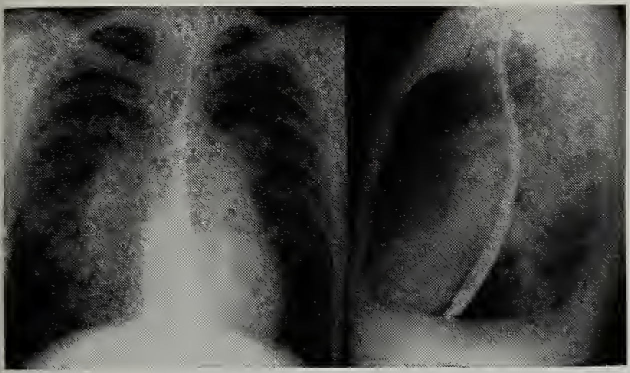


Fig. 3. Acyanotic: Increased Vascularity—Atrial septal defect (secundum type).

A. *Chamber Enlargement*
Right atrium.
Right ventricle.

B. *Great Vessels*
Pulmonary artery large.
Aorta hypoplastic.

C. *Pulmonary Vascularity*
Increased.

D. *Principal Differential Diagnosis*
Ventricular septal defect—left sided enlargement.
Atrial septal defect—primum type—left sided enlargement.

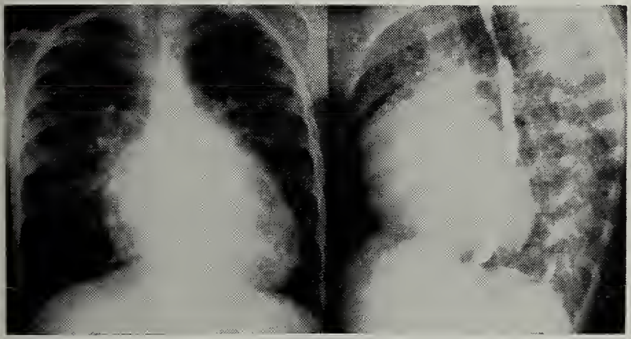


Fig. 4. Acyanotic: Increased Vascularity—Atrial septal defect (primum type). (Atrioventricular valve involved in septal defect, produces mitral incompetence.)

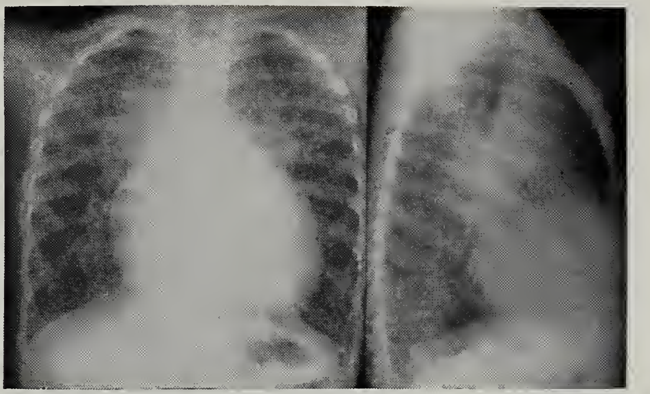
A. *Chamber Enlargement*

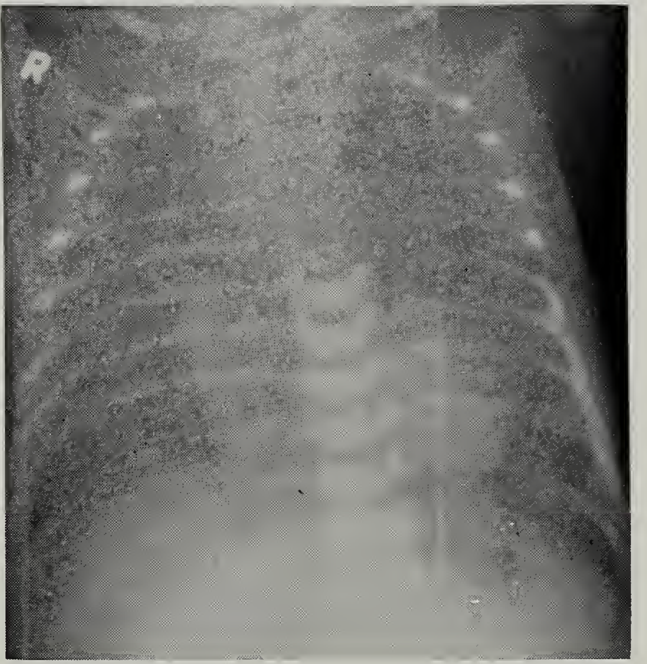
| | |
|---|---|
| Right atrium. | Left atrium. |
| Right ventricle. | Left ventricle. |

B. *Great Vessels*
Pulmonary artery large.
Aorta hypoplastic.

C. *Pulmonary Vascularity*
Increased.

D. *Principal Differential Diagnosis*
Ventricular septal defect—no right atrial enlargement—murmur different.
Atrial septal defect—secundum type—no left sided enlargement.





Figs. 5 and 6. Acyanotic: Increased Vascularity—Anomalous pulmonary venous connection. Functionally significant when 50% or more of pulmonary veins drain anomalously.

A. *Chamber Enlargement*
Right atrium.
Right ventricle.

B. *Great Vessels*
Pulmonary artery large.
Aorta hypoplastic.

C. *Pulmonary Vascularity*
Increased.

D. *Principal Differential Diagnosis*
Atrial septal defect—murmur different. Diagnosis possible by catheterization only, except in one of these types:

(1) Drainage of right lung into inferior vena cava. Anomalous vessel visible at right median base coursing inferiorly.

(2) Total anomalous venous drainage into persistent left superior vena cava. Cyanotic—"Figure-of-Eight Heart" (left).

(3) Total anomalous venous return below diaphragm

—newborn, cyanotic, pulmonary vascular engorgement —normal heart size (right).

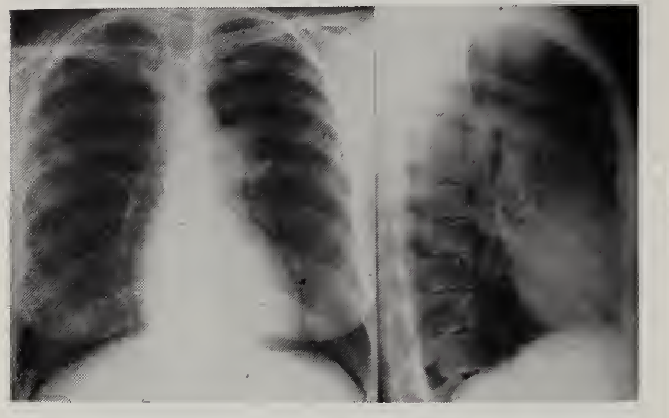


Fig. 7. Acyanotic: Decreased Vascularity—Pure pulmonic stenosis.

A. *Chamber Enlargement*
    Right atrium prominent.
    Right ventricular hypertrophy.

B. *Great Vessels*
    Pulmonary artery enlarged (post-stenotic dilatation which includes left pulmonary artery only).

    Aorta—normal or small (depending on severity of stenosis and degree of cardiac rotation).

C. *Pulmonary Vascularity*
    Vessel size normal (80 per cent).
    Vessel size decreased (20 per cent). Depending on patency of foramen ovale.

D. *Principal Differential Diagnosis*
    Atrial septal defect—Aorta small; pulmonary vasculature increased. Both pulmonary arteries enlarged.

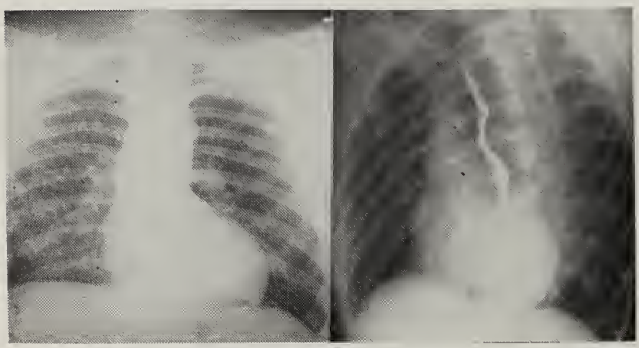


Fig. 8. Acyanotic: Normal Vascularity—Coarctation of the aorta.

A. *Chamber Enlargement*
    Left ventricular hypertrophy and/or dilatation.

B. *Great Vessels*
    Ascending aorta dilated. Transverse arch narrow—post-stenotic dilatation distally.
    Left subclavian and innominate arteries dilated.
    Aorta buckled anteriorly and medially at site of coarctation producing lateral and posterior concave impressions on barium filled esophagus.

C. *Pulmonary Vascularity*
    Normal

D. *Rib Notching*—80 per cent of adults with coarctation.

E. *Principal Differential Diagnosis*
    Congenital aortic stenosis—rib notching uncommon. Configuration of transverse and descending aorta not unusual.

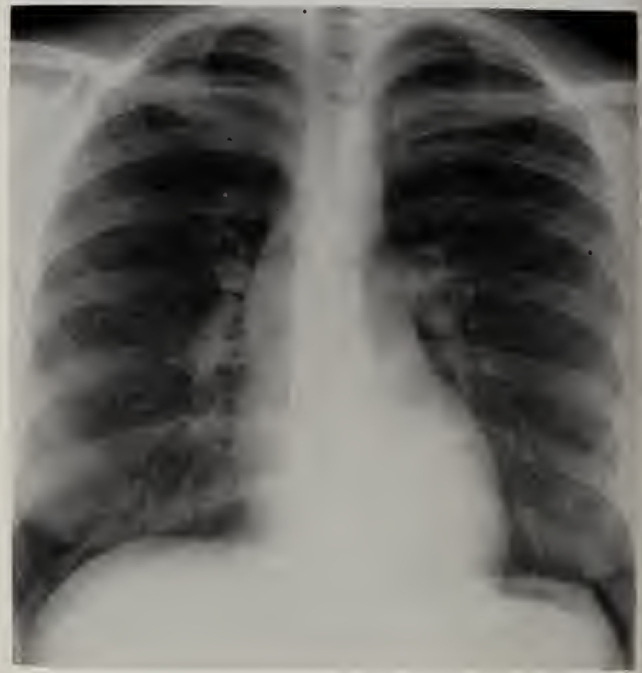


Fig. 9. Acyanotic: Normal Vascularity—Congenital aortic stenosis.

A. *Chamber Enlargement*
    Left ventricular hypertrophy and/or dilatation.

B. *Great Vessels*
    Dilatation of ascending aorta. Fluoroscopy shows marked systolic thrust of ascending aorta that does not extend into transverse or descending aorta. Calcification of aortic valve not uncommon in adults.

C. *Pulmonary Vascularity*
    Normal.

D. *Principal Differential Diagnosis*
    Coarctation of the aorta. Normal configuration of transverse and descending aorta in congenital aortic stenosis.

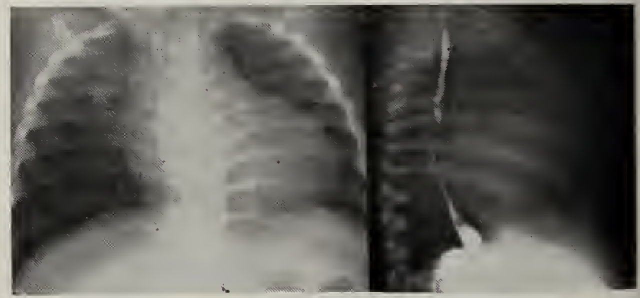


Fig. 10. Acyanotic: Normal Vascularity—Endocardial fibroelastosis.

A. *Chamber Enlargement*
Left ventricle—Poor contraction at fluoroscopy.
Left atrium.

B. *Great Vessels*
Aorta small (poor cardiac output).

C. *Pulmonary Vascularity*
Normal.

D. *Principal Differential Diagnosis*
Congenital aortic stenosis—ascending aorta dilated. Amplitude of cardiac pulsations not decreased.

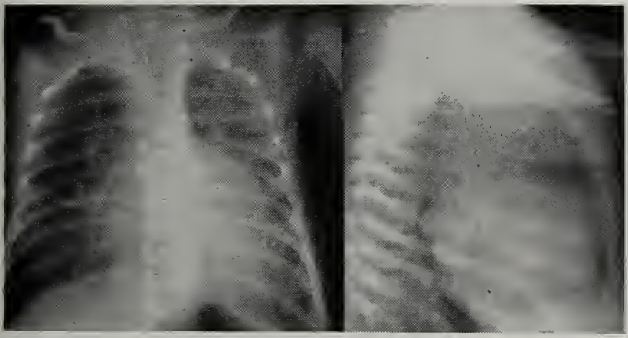


Fig. 11. Cyanotic: Increased Vascularity—Complete transposition of the great vessels.

A. *Chamber Enlargement*
Heart shape more significant than chamber analysis —Globular or "egg shaped." Rounded end to right and pointed end directly obliquely to left.

B. *Great Vessels*
Pulmonary artery segment concave (malplaced).
Aorta inconspicuous (malplaced).
Vascular pedicle narrow in PA view.

C. *Pulmonary Vascularity*
Usually increased due to associated stenosis in outflow tract.
Most blood out pulmonary artery from left ventricle.

D. *Principal Differential Diagnosis*
Truncus arteriosus—waist of heart broad, large "aorta."

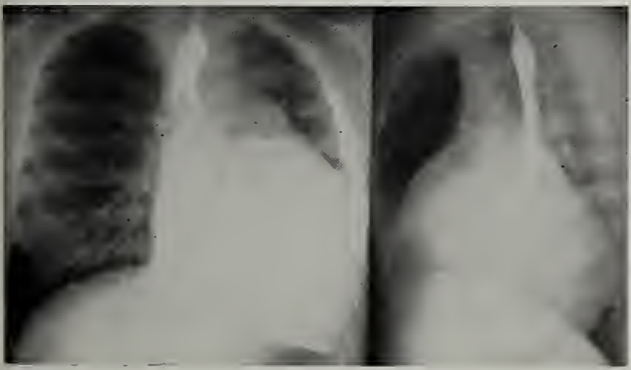


Fig. 12. Cyanotic: Increased Vascularity—Truncus arteriosus.

A. *Chamber Enlargement*
Shape variable, biventricular enlargement.
Suggestive is horizontal left upper border in frontal projection.
Posterior protrusion and horizontal appearance in left anterior oblique projection and shelf-like protrusion in right anterior oblique projection.

B. *Great Vessels*
"Aortic" shadow variable, when large is diagnostic.
Pulmonary artery segment flat or concave.
Pulmonary arteries and hili high in position and do not appear to have a normal connection with the outflow tract of the right ventricle via a pulmonary trunk.

C. *Pulmonary Vascularity*
Increased (except in those cases where there are no pulmonary arteries).

D. *Principal Differential Diagnosis*
Transposition of the great vessels—waist of heart narrow, pulmonary arteries not elevated. Cardiac configuration "egg shaped."

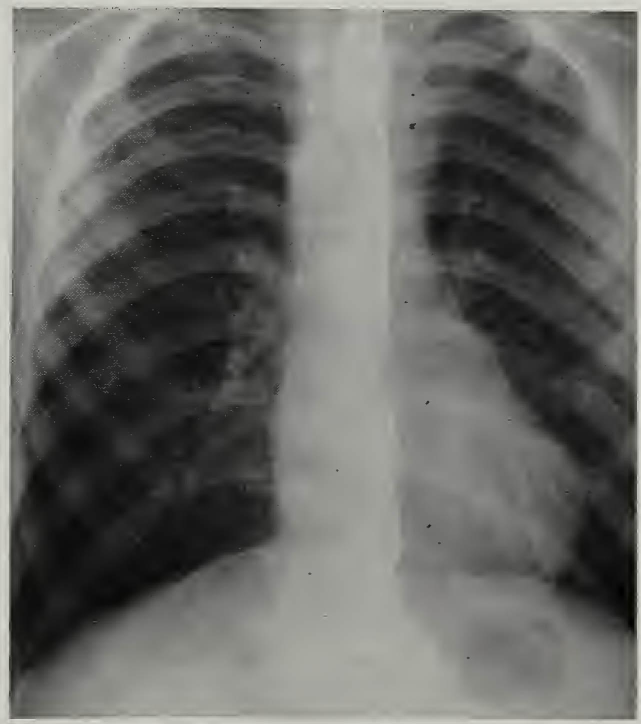


Fig. 13. Cyanotic: Decreased Vascularity—Tetralogy of Fallot.

A. *Chamber Enlargement*
Right ventricular hypertrophy; boot-shaped heart (20 per cent).

B. *Great Vessels*
Pulmonary artery segment concave.
Aorta enlarged. Right sided in 25 per cent.

C. *Pulmonary Vascularity*
Decreased.
Bronchial collateral vessels—torturous, irregular course, point of origin from aorta rather than pulmonary arteries.

D. *Principal Differential Diagnosis*
Tricuspid atresia—EKG axis to left. Large right atrium and left ventricle.
Trilogy of Fallot—large pulmonary artery.

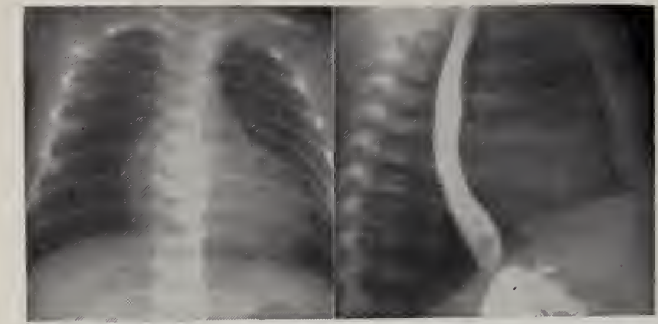


Fig. 14. Cyanotic: Decreased Vascularity—Trilogy of Fallot. (Pulmonic stenosis with atrial septal defect, right to left shunt.)

A. *Chamber Enlargement*
Right ventricle.

B. *Great Vessels*
Aorta—small.
Pulmonary artery large—post-stenotic dilatation.

C. *Pulmonary Vascularity*
Decreased.

D. *Principal Differential Diagnosis*
Tetralogy—aorta large and pulmonary artery small.

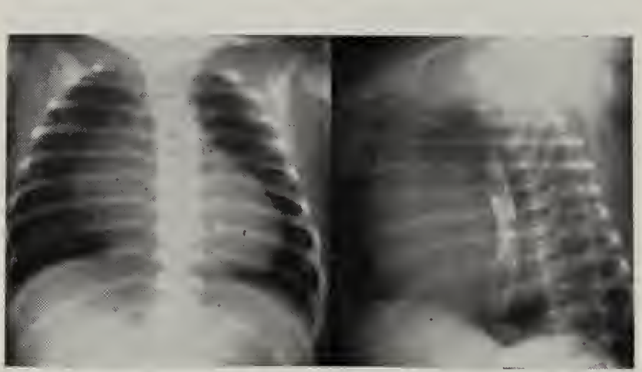


Fig. 15. Cyanotic: Decreased Vascularity—Tricuspid atresia.

A. *Chamber Enlargement*
Right atrium—huge.
Left ventricle.
Left atrium.

B. *Great Vessels*
Aorta—large.
Pulmonary artery—concave.

C. *Pulmonary Vascularity*
Decreased.

D. *Principal Differential Diagnosis*
Tetralogy of Fallot—right ventricle large, EKG axis to right.

It has been estimated that in approximately 75 per cent of patients with congenital heart disease, the type of malformation can be accurately determined by the history, electrocardiographic findings and conventional roentgen examination.[1] The roentgenographic contribution probably constitutes the most important part of this examination.

The data presented here represent an oversimplification of the problem. Not only do many of these lesions have variations that alter the diagnostic criteria but, in addition, analysis of chamber enlargement and pulmonary vessel size is by no means easy, particularly in children. However, it is necessary to formulate such a basic set of criteria for each lesion and to modify them with added experience. An attempt has been made, therefore, to point out the contribution of the plain film in this role and to suggest a useful approach to the analysis of the roentgenographic findings in congenital heart disease.

## SUMMARY

A format for an orderly approach to the analysis of plain film findings in congenital heart disease has been presented. This format is based upon the clinical determination of the presence or absence of cyanosis and the radiographic examination of the state of the pulmonary vascularity. The roentgenographic features and differential diagnosis of each of the common congenital heart lesions is presented in tabular form.

Medical Center

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[1] Kincaid, O. W.: Approach to the Roentgenologic Diagnosis of Congenital Heart Disease, J.A.M.A. **173**:637-647 (June 11) 1960.

**A. DENTON VAIL, M.D.,** ***Springfield***

# Thyroid Function

## *The Uptake of $I^{131}$-l-Triiodothyronine by the Human Red Blood Cell as a Diagnostic Test*

**The T-3 Erythrocyte Uptake is an extremely accurate, rapid and inexpensive test for thyroid function and is not subject to error from exogenous iodides. It is not recommended that the other standard laboratory tests be abandoned but that this test be used as an additional diagnostic tool in the solution of thyroid problems.**

**Case reports from a series of 400 studies are presented.**

**Dr. Vail specializes in surgery.**

In the last 15 years, through the ability to label and measure trace amounts of radioactivity, a large number of isotope tests have been perfected. Of all of the isotopes, iodine has been adapted to more diagnostic problems than any other and because of the specific ability of the thyroid gland to trap and utilize iodine for the manufacture of thyroid hormone, the frequency of thyroid disease and the suitable half life (eight days) of the isotope, radioactive iodine has had its greatest application in connection with studies of thyroid function.

Among the large number of iodine studies available, those having the greatest acceptance and most frequent application in the past are (1) the $I^{131}$ Uptake, with determination at either four, six or eight hours and at 24 hours and (2) the conversion ratio. Also should be mentioned the serum protein bound iodine (PBI) which, although not a radioactive study, does involve the measurement of iodine. Unfortunately, whether or not they involve the use of radioiodine, all iodine studies are subject to certain serious disadvantages. All of them may be inaccurate in the presence of exogenous iodides which may have entered the body through the ingestion of iodide as such, or in the form of medications containing iodide. In addition, all may be seriously distorted by iodine introduced through the air as well as through contamination of equipment. Also a large number of substances have been found, in the form of medication or materials administered for diagnosis or treatment which interfere with the tests and the tests are not too accurate in borderline or hypothyroid states. They are of no value as a means of follow up in patients who are on replacement therapy for hypothyroidism or in those patients who have recently received radioactive iodine therapy.

It is most important to realize that there are many steps in the iodine cycle, from the uptake of iodine by the thyroid gland through the utilization of hormone by the cell, and that there is no one test which will measure all of these functions of the thyroid gland. Each test, therefore, measures only a specific portion of thyroid activity. It is, therefore, obvious that each test gives information not obtained by any other test. For example, the $I^{131}$ Uptake study is a measurement only of the ability of the thyroid gland to take up iodine. While, in general, this has been found to be a reflection of thyroid function, an abnormal value does not always mean abnormal thyroid function. While an elevation of thyroid $I^{131}$ Uptake would be expected in an uncomplicated case of hyperthyroidism, this finding can also reflect a simple iodine deficiency. Elevations are also found in pregnancy, fever, chronic liver disease and in goitrous cretins and are associated with the administration of acetazolamide (Diamox), adrenal steroids (two to seven days after cessation of therapy), thyroid hormone (three to four weeks after cessation of therapy), antithyroid drugs (after several weeks of therapy), antituberculosis drugs (PAS and INH after several months of treatment), sulfonamides (large doses), several months after cobalt (hematinic) treatment, and many others.[25] On the other hand a reduced thyroid $I^{131}$ Uptake, while frequently associated with simple hypothyroidism, can occur in athyreotic cretinism, pituitary failure, subacute thyroiditis, in the presence of exogenous iodides (thyroid hormone, many vitamin preparations, Lugols solution, cough medicines containing iodides), with the use of adrenal steroids, antithyroid drugs (during the first few weeks of therapy), Butazolidine, following the use of many radiographic contrast media such as Diodrast, Hypaque, Urokon and others of the aqueous group, Lipiodol, Pantopaque and others of the oil solutions, opaque media for cholecystograms (Cholografin, Telepaque, Priodex) and materials for use in bronchograms, tubal insufflations and pyelography (Skiodan, Salpix, Orabilex, Lipiodol).*

The PBI, while in general reflecting the ability of the thyroid gland to incorporate iodine into thyroid hormone which, upon release from the gland becomes bound to certain components of the plasma, is likewise not always, in itself, an accurate index of thyroid function. Exogenous iodides, as the result of "loading" of the thyroid gland, are therefore capable of reducing the 24 hour $I^{131}$ Uptake while, at the same time, as the result of increasing the iodine content of the plasma, producing increased values for the PBI. This is true in general although there are a few exceptions.[25]

In 1952 Gross and Pitt-Rivers identified the thyroid hormone, 3-5-3′-l-triiodothyronine (T-3) in human plasma and subsequently reported on its isolation, synthesis and physiologic activities.[1, 2, 3, 8, 9] This opened an entirely new field of investigation into the properties of this hormone, prominent among which were studies of its binding sites.[4-7, 10-13] These studies revealed that both l-thyroxine (T-4) and T-3, in physiologic concentrations, are bound to a specific plasma protein characterized by an electrophoretic mobility immediately between alpha-1 and alpha-2 globulins (inter-alpha zone). Dingledine and associates[14] found that binding of T-4 not only occurs with the inter-alpha globulin but, to a lesser degree, with albumin fraction, the inter-alpha bond being much stronger. Hamolsky[15] reported that red blood cells would bind $I^{131}$ labeled T-3 and T-4, a number of these studies being conducted on pregnant women. Dowling and associates[16, 17] continued investigation of T-4 binding in pregnant women as well as in newborn infants and women with spontaneous abortion. Studies by Crispell and associates[18, 19] and Freinkel and associates[20] revealed that the presence of human plasma markedly inhibited the uptake of labeled T-4 and, to a lesser extent, labeled T-3, by red blood cells in a saline suspension. They suggested, therefore, that the availability of thyroid hormone to the cell was dependent upon the relative binding capacity of the serum and perhaps a specific binding protein for T-3 or T-4 in the cell. In 1957, Hamolsky and associates[21] introduced the in-vitro erythrocyte uptake of $I^{131}$ labeled T-3, describing criss-cross experiments using hyperthyroid plasma with euthyroid and hypothyroid cells and hypothyroid plasma using euthyroid and hyperthyroid cells, thereby demonstrating that the erythrocyte uptake is determined by the thyroidal state of the patient from whom the plasma is obtained. These findings have been supported by Crispell and associates.[22] Further studies on specific binding proteins for T-4 in pregnancy have been reported by Macy[23] and Robbins and Nelson[24] and have shown decreased erythrocyte binding of T-4 associated with increase in specific binding globulins in the plasma. Their explanation of this phenomenon may be subject to some question, as pointed out by Hamolsky and associates.[27]

In 1957 Hamolsky and associates,[27] in an excellent report of their observations in 2,900 determinations by this method, have summarized their findings after applying the study to a wide variety of conditions. The method is simple and rapid and therefore serves as an excellent screening test. It avoids the administration of radioactivity to the patient and is therefore excellent for use in children and pregnant women. The diagnostic accuracy of the test compares most favorably with that of all currently used methods. It permits the assessment of thyroid function under conditions in which other standard methods are not applicable. It is relatively unaffected by prior administration of organic iodine-containing compounds in less than therapeutic doses. It is useful in following the adequacy of therapy for hyperthyroidism, either with antithyroid drugs, surgery or radioactive iodine and in replacement therapy for hypothyroidism. It has been found to give characteristically altered values in a wide variety of conditions, thereby furnishing an additional diagnostic tool to the clinician. Values for the T-3 Erythrocyte Uptake test have been found to be decreased in pregnancy, during administration of estrogens and in treatment of hyperthyroidism with antithyroid drugs or iodides in therapeutic dosages. Values are increased in patients having nephrosis, severe liver disease, severe metastatic malignancy, severe pulmonary insufficiency with $CO_2$ retention, paroxysmal atrial arrhythmias and in patients under treatment with anticoagulants (Dicumarol, heparin). In some cases the results correlate better with the thyroid status of the patient than results by other methods. These findings have been substantiated, in whole or in part, in reports by Robbins,[28] Ureles and Murray,[26] Tanaka and Starr[30] and Kurland and associates.[29]

In the last two years a modification of the

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* A more complete list of the chemicals and drugs which interfere with the I-131 thyroid uptake test is available from E. R. Squibb & Sons, New York.

Hamolsky method has been devised, using resin granules, beads or resin sponge.[31, 33] At the present time these methods not only present certain technical difficulties but are also influenced by several factors other than thyroid function, which have been shown to affect values. No doubt these difficulties will be resolved but, until then, the Hamolsky method will probably be best suited to the average laboratory.

It is not the purpose of this paper to outline the specific details of the T-3 Erythrocyte Uptake test. In general, the test is performed by the addition of $I^{131}$-l-triiodothyronine to whole blood, after which it is incubated at body temperature to allow binding of the hormone to the binding sites in the plasma. Following this, duplicate small samples of the incubated blood are prepared and counted in a deep well counter for a sufficient number of counts to provide a counting efficiency of within 2 per cent error. The duplicate samples are then each washed six times in normal saline, following which the washed red blood cells are again counted to measure the amount of hormone which has adhered to them. After converting the results to a hematocrit of 100 per cent, the percentage of uptake of the radioactive T-3 by the red cell is determined. It should be pointed out that many phases of the test are critical, such as speed of rotation in the water bath, method of incubation, time of incubation, volume of each wash, number of washes, temperature for incubation and washing, speed with which the entire process is completed from start to finish and the use of a constant concentration of T-3 solution. It therefore follows that careful attention to all aspects of the test are important and that this is not a test which will be accurately accomplished by the simple pushing of a button. The average range of values for the test will therefore necessarily be established by each laboratory according to the method used.

As previously pointed out, the T-3 Erythrocyte Uptake test has become a most valuable diagnostic tool because it eliminates the major cause of error which is inherent in all of the standard iodine studies of thyroid function, namely the effect of exogenous iodides. At first glance the reasons for this may seem a little complicated but actually the explanation is fairly simple.[32] Thyroid hormone substances, thyroxine and triiodothyronine, upon entering the blood are bound to plasma proteins and red blood cells. While there are many plasma fractions, it is believed that there are specific plasma proteins which selectively bind T-4 and T-3. These are believed to be an inter-alpha globulin, the major binding fraction, and possibly a pre-albumin fraction and serum albumin, these latter contributing very slightly to the over-all binding. On the other hand, the organic iodine compounds, including radiographic media, appear to be bound to the albumin fraction of the plasma. Thus they are precipitated with all the proteins and come down as iodine bound to protein, thereby contributing to the total PBI. They do not, however, interfere with the binding sites of the most important binding proteins in the plasma for T-4 or T-3. The total iodine bound to all protein is, therefore, increased without significant effect on the amount bound to the specific binding sites for T-4 or T-3. Since there is no alteration in binding sites for T-4 and T-3, the competition between plasma and red cells for the binding of T-4 and T-3 is not affected. Iodide ingested by a patient is primarily bound to the albumin fraction and therefore has no effect on binding sites for T-4 and T-3 in the plasma. The T-3 Erythrocyte Uptake test therefore appears to depend primarily on the binding of a highly specific protein in the plasma and a factor in the membrane of the red blood cell and since these factors are not influenced by exogenous iodine the T-3 Erythrocyte Uptake test is not affected by iodine enrichment of whole blood or plasma.

## Case Reports

The following will briefly illustrate the value of the T-3 Erythrocyte Uptake test in its application to and correlation with the clinical aspects of a few cases.

Case 1: Male, aged 52, was referred for determination of the cause of exophthalmos. There was prominence of eyes of two months duration, nervousness for years but increased in last two months, excessive drive—"had to be doing something all the time even if it was useless," excessive appetite with weight loss and rapid heart action. When first seen he had been taking Lugols solution in therapeutic doses for three weeks.

Physical examination showed pulse was 90 and regular, skin warm and moist, proptosis 23 mm. in each eye, slight lid lag on left, thyroid gland normal size but bruit present on both sides, weight 137 pounds, a gain of 10 pounds in the last three weeks. The T-3 Uptake was 15.2 per cent—15.6 per cent (normal for males 11.7 per cent to 19 per cent) and since iodides in therapeutic doses can depress thyroid hyperfunction it was felt that the patient had exophthalmic goiter in partial remission due to recent iodine therapy. On withdrawal of iodine the patient became more nervous, eyes more prominent, gross tremor of fingers appeared and pulse increased to 100. $I^{131}$ Uptake at four hours was 35 per cent, at 24 hours 58 per cent and T-3 Uptake 20 per cent —21 per cent. TSH stimulation resulted in no increase in $I^{131}$ Uptake. Preparation for surgery with antithyroid drugs resulted in euthyroidism with reduction in pulse to 70, increase in weight to 147 pounds, proptosis reduced to 19 mm. and 20 mm. and complete absence of tremor and nervousness. One week after institution of antithyroid therapy the T-3 Uptake was 18 per cent, after three weeks 14 per cent and at six weeks 12.6 per cent with the pulse 68. Two weeks following surgery the pulse was 64 and the T-3 Uptake was 11.2 per cent—11.8 per cent. It was obvious clinically that the patient was beginning to show hypothyroidism and he was started on thyroid medication. Upon returning two weeks later the pulse was 60, weight had increased four pounds, he was beginning to feel a little tired and draggy and the T-3 Uptake was 8.6 per cent—9.2 per cent. On questioning him as to his dosage of thyroid medication, in the face of a continued lowering of the T-3 Uptake, it was found that he had not been taking his medication because of a misunderstanding. Upon institution of thyroid medication, he returned in two weeks at which time the T-3 was 13.8 per cent—13.3 per cent, the pulse was 68 and he was no longer feeling tired or draggy. Thyroid medication was slowly increased over the next four weeks until he appeared clinically euthyroid, exophthalmos was slightly improved, pulse 80, weight 140 pounds and the T-3 Uptake was 14.0 per cent—14.2 per cent. Since then he has continued to feel fine and the exophthalmos is slowly subsiding.

Note: Although the history strongly suggested recent onset of exophthalmic goiter, the initial clinical findings were not too abnormal as the result of therapeutic iodine administration of three weeks duration. The first T-3 Uptake was within normal range. Withdrawal of iodine resulted in prompt relapse which was immediately reflected in the T-3 Uptake. Preparation with antithyroid drugs could be accurately followed preoperatively and postoperatively and the test gave early indication of beginning hypothyroidism without having to wait for a classical picture to develop before starting replacement therapy. This is particularly important in exophthalmic goiter where it is not uncommon to observe progression of the exophthalmos if hypothyroidism is not adequately corrected.

Case 2: Female, aged 45, had had exophthalmic goiter of three months duration with proptosis of 21 mm. in each eye, loss of weight 10 pounds in two months, excessive drive and nervousness, pulse 100 and regular, marked gross tremor of fingers, skin warm and sweaty, lid lag, bruit over left lobe of gland which was two times normal size but diffuse. $I^{131}$ Uptake at four hours was 30 per cent, at 24 hours 50 per cent, and the T-3 Uptake 19.4 per cent—19.8 per cent (normal for females 11.0 per cent—17.0 per cent). A PBI was not done as she had been taking a vitamin containing significant amounts of iodine for the last four weeks. After four weeks on antithyroid medication she was much improved clinically with pulse 76 and T-3 Uptake of 11.5 per cent—11.6 per cent. After eight weeks of antithyroid medication she was feeling fine, pulse 68 and T-3 Uptake was 12.5 per cent—12.6 per cent. Radioactive iodine therapy was then given and one month later she was feeling good but complaining of being just a little tired. The T-3 Uptake was 10.2 per cent—9.9 per cent and she was started on thyroid medication. Four weeks later the pulse was 80, no nervousness, normal pep and energy, no eye complaints and marked reduction of exophthalmos. The T-3 Uptake was 11.2 per cent—11.3 per cent.

Note: This demonstrates the accuracy of the T-3 Uptake test as a means of following the patient before, during and after radioactive iodine therapy to a post-therapy euthyroid status with no interference by exogenous iodides.

Case 3: Male, aged 40, when first seen gave a history of frequent attacks of hypertension and severe headaches. For years he had been extremely nervous and irritable and this seemed to be brought on by strenuous work. He also had dizziness and shortness of breath with nervousness. When the blood pressure became elevated he would have severe headaches on top of his head and "it felt like it was in a vise," he would become dizzy and even stagger and had bad dreams. Spells would be severe about every three to four weeks, lasting two to three days and he would have to go to bed. Onset began in 1943 while in service. He was discharged after three years of service during which time he was in and out of the hospital many times, had also been in VA Hospitals many times since discharge, had consulted many physicians and had been referred to neurologists and psychiatrists with extensive studies, including E. E. G., which were all normal except for elevations of blood pressure during the attacks, his recollection being that systolic values varied between 180 to 200 mm. Hg. It is important to know that this man had an excellent insight, was not blaming his problems on anyone else and did not seem to be using his symptoms as an escape mechanism. Casual examination revealed a nervous, extremely agitated patient with pulse 112, blood pressure readings on several occasions of 180/100, hot sweaty skin and gross tremor of the fingers. Medical consultation ruled out all significant organic sources except the possibility of hyperthyroidism. Investigation of this revealed $I^{131}$ Uptake at four hours 5 per cent, at 24 hours 11 per cent and T-3 Uptake was 9.0 per cent. Following these results a review of the history revealed that for a long time he would tire easily, especially in the legs and feet. Walking up stairs particularly bothered him, sometimes having to rest part way up. His nervousness and irritability were intensified by noise but never associated with depression and he had had heat intolerance for several years, both in winter and summer. The internist, upon report of the thyroid studies, was extremely dubious as to their validity and decided to try him for a period on tranquilizers. He returned in two weeks with no improvement and it was then decided to institute thyroid medication. Four weeks later the T-3 Uptake was 13.3 per cent—13.2 per cent, he had had no recurrence of his trouble and he stated he had not felt so well in 20 years. He has remained symptom free on thyroid medication.

Note: This is a most outstanding example of how misleading severe hypothyroidism can be. This case continued undetected over a period of several years with considerable suffering as well as disability. Even in the face of low values for thyroid function it was difficult to believe that hypothyroidism existed. The T-3 Uptake was demonstrated as definitely more accurate than the clinical impression and proved by institution of replacement therapy.

Case 4: Female, aged 27, was referred for enlargement of the thyroid gland which was first noticed following delivery of her last child nine months previously. History showed loss of pep and energy and weight gain of 15 pounds in eight months. Periods began at age 14 and were always normal and regular. There had been three uneventful pregnancies. Physical examination showed the hair coarse, the skin slightly dry and the thyroid about three times normal size, diffuse, soft and rubbery. $I^{131}$ Uptake at four hours was 8 per cent, at 24 hours 7 per cent. The T-3 Uptake was 10.4 per cent—10.9 per cent. On thyroid medication, gradually increased to one grain daily, she became entirely symptom free, the T-3 Uptake was 13.2 per cent—13.4 per cent and after six months therapy the thyroid gland is about half its former size.

Note: This patient had not impressed her physician with a clinical appearance of hypothyroidism and symptoms were noted only in the last eight months. However, it was obvious that she had probably had borderline thyroid function as a child, puberty having produced a burden for the thyroid which was later accentuated with each of three pregnancies and following the last one she had finally noted compensatory enlargement of the gland and a few early symptoms of hypothyroidism had finally presented.

Case 5: Female, aged 32, was referred for painful rapid enlargement of the thyroid gland. Pain in the region of the right thyroid lobe had begun five weeks previously. She had never previously noticed anything unusual about her neck but one week after onset she noted an enlargement of the right side of the thyroid and shortly thereafter she noticed nodule formation in the right lobe which increased rapidly in size. Since onset swallowing had been quite painful, there had been a loss of five pounds in weight, increased nervousness and irritability and in the last two weeks fever and chills. Prior to onset she had always had plenty of pep and energy but had been extremely tired and listless since. Physical examination showed she was 59 inches tall and weighed 71 pounds. The pulse rate was 104 and regular. No eye signs were present. The thyroid gland was estimated at about three times normal size, the right lobe showing marked enlargement with two nodules each about ½ inch in diameter near the upper pole and one nodule about 1 inch in diameter near the junction of the right lobe and isthmus. There was a small nodule ½ inch in diameter in the middle of the left lobe. The gland was extremely tender and hard. The right lobe was more tender than the left. Upon swallowing, pain radiated from the right lobe of the thyroid to the right ear. There was no cervical adenopathy and no bruit. The skin was moist but not hot and the hands were sweaty. Because of her financial circumstances she did not wish to obligate herself for any studies and said she would return later. When she returned one month later the right lobe of the thyroid had returned to almost normal size and the nodules previously noted had disappeared. The left lobe, during this interval, had become about twice normal size and presented several nodules from ½ inch to 1 inch in diameter. The right lobe was only slightly tender but the left was now extremely painful. The temperature was 102 degrees F., the pulse 130. Sedimentation rate was 55 mm. in 30 minutes and 60 mm. in one hour. $I^{131}$ Uptake at four hours was 2 per cent, 24 hours 2.4 per cent and the T-3 Uptake was 22.1 per cent—22.9 per cent. TSH stimulation showed 1 per cent uptake in 24 hours. She was placed on antithyroid drugs and in two weeks there was dramatic improvement with the thyroid gland being about normal size in each lobe. The nodules which had been present in the left lobe had all disappeared except one which was barely palpable. The pulse was 88, the temperature normal and she had gained three pounds in weight. After four weeks of antithyroid medication she was feeling normal in every respect, the T-3 Uptake was 8.5 per cent—8.6 per cent, sedimentation rate was 8 mm. in 30 minutes, 24 mm. in one hour. She was instructed to return four weeks later for a final checkup but did not do so, calling to say that she was feeling fine.

Note: This case demonstrates the high values usually associated with acute thyroiditis accompanied by normal to reduced values for the standard tests of thyroid function and correlates well with the improvement following antithyroid medication.

Case 6: Male, aged 15, was referred for a possible thyroid problem. His parents stated that he was tired all of the time, it was difficult to get him up in the morning to go to school and he seemed to be exhausted by most physical activities. A PBI done two weeks previously had been reported 2.3 mcg. per cent and there was a question of whether the boy was suffering from hypothyroidism. Also in the history was the fact that the boy had had epilepsy since 1957 but this was well controlled with daily doses of Dilantin. Further investigation into the history revealed that while he would get tired whenever he had chores to do around the house it did not bother him if he was playing with his friends. His grades were poor the past year in school but it also developed that he would rather watch TV than study his school work. Physical examination revealed a dry skin which was of a pimply and rough texture all over his body and not what one would usually expect with thyroid deficiency. The heart was normal but the pulse rate was 48 and regular. An electrocardiogram revealed a normal tracing showing sinus bradycardia with no evidence of complex deviations as would be expected in hypothyroidism. Other laboratory work including red and white blood counts and differential, sedimentation rate, hematocrit and urinalysis were normal. Thyroid studies were as follows: $I^{131}$ Uptake at four hours 6 per cent, 24 hours 18 per cent, $I^{131}$ neck-thigh ratio 5.15 per cent, $I^{131}$ 24 hour urinary excretion 66 per cent, total accountable iodine 84 per cent and T-3 Uptake 12.7 per cent—12.8 per cent. The marked discrepancy between the reduced PBI and the other normal thyroid studies was explained by the fortuitous publication by Oppenheimer et al.[34] in that same week reporting the depression of the PBI by diphenylhydantoin.

Note: Although the PBI here suggested hypothyroidism the T-3 Uptake confirmed the clinical impression of euthyroidism as determined from the history and physical examination. The report of PBI values being reduced by the administration of Dilantin therefore substantiated the accuracy of the test.

Case 7: Female, age 43, was referred for possible hyperthyroidism and evaluation of a thyroid nodule. There was a history of a nodule in the neck, present for the last eight or nine years. In the last few months the patient had been extremely nervous. She had had a poor appetite off and on and weight loss of about 40 pounds in the last year. There had been no heart symptoms, no choking sensations or difficulty in swallowing. She had noticed no changes in the texture of her skin. She frequently noticed tremor of her fingers. For several months she had had heat intolerance. For the last three years she had noticed a considerable reduction in pep and energy. She had always had rather thick hair but in the last six to nine months it had been coming out rapidly. Her periods had always been normal and regular but they had stopped about six months previously and she was not pregnant. Physical examination revealed a height of 66 inches and weight 113 pounds with obvious malnutrition. The hair on the head was extremely scant but fine. The eyes showed nothing unusual except that the sclerae were icteric. The thyroid gland was approximately normal size but presented a nodule in the isthmus in the midline which was one inch in diameter and firm. The heart was normal. The blood pressure was 155/110, pulse rate 108 and regular. The skin of the body was of normal moisture and texture but on the upper extremities it was soft on the flexor and dry on the extensor surfaces. The palms were moist and there was marked tremor of the outstretched fingers. Abdominal examination revealed marked enlargement of the liver with the anterior margin extending five inches below the right costal margin, the enlargement involving the entire organ. The upper surface felt smooth and no friction rubs were heard over it upon deep breathing. The $I^{131}$ Uptake was 17 per cent at four hours and 33 per cent in 24 hours. Scan of the thyroid revealed essentially equal uptake in all portions, including the nodule. In doing the T-3 Uptake, which was 18.2 per cent—18.9 per cent, the plasma was noted to be extremely icteric. Since the T-3 Uptake is known to be elevated in severe liver disease and in view of the normal $I^{131}$ Uptake study, it was not felt that the thyroid presented any important problem at the moment. She was accordingly sent back to the referring physician who treated her for cirrhosis. As was later revealed by her physician, she had been an alcoholic for the last three years since the death of her husband.

Note: In this case, even without knowledge of the findings on physical examination, one would have been most suspicious of liver disease as the result of the observed icterus of the serum and high value of the T-3 Uptake test. This was later confirmed and demonstrates the value of the test in one of the conditions, other than thyroid malfunction, in which it is known to be altered.

Case 8: Female, aged 45, was referred for the possibility of a thyroid problem because of frequent episodes, during the last year, of paroxysmal atrial arrhythmia. These attacks, from one to four daily, would occur suddenly for no apparent reason with extremely sudden rapid heart action, a feeling of tightness in the chest, difficulty in getting a deep breath and a fluttering sensation in the chest. They might last five minutes or an hour and would stop as suddenly as they began. She had been seen by her physician on a number of occasions when having these attacks and he stated that while they were usually only tachycardia, he had observed some occasions in which there had been fibrillation. These episodes had frightened her so that she did not feel safe to drive her car. At the time of her examination there was nothing to suggest thyroid abnormality of any kind. The PBI was 5.2 mcg. per cent, $I^{131}$ Uptake at four hours 15 per cent, at 24 hours 22 per cent, and the T-3 Uptake was 19.8 per cent—

20.2 per cent. Since it is known that paroxysmal atrial arrhythmias are accompanied by an elevation of the T-3 Uptake the thyroid gland could not be incriminated in view of the other normal thyroid studies and the apparent clinical euthyroidism.

Note: Paroxysmal arrhythmias are not characteristic of hyperthyroidism. The history of sudden onset and variable short duration strongly suggests other etiology. Here the standard tests showed no thyroid abnormality. The elevated T-3 Uptake demonstrates the known tendency of the test to be elevated in this condition.

## Summary

My experience with the application of the T-3 Erythrocyte Uptake test to thyriod problems in approximately 400 studies confirms the findings of previous authors regarding the outstanding value of the test. This test, when carried out with careful attention to all details of technic, is extremely accurate to a degree equal to and sometimes better than the standard methods of the past. One of the greatest difficulties with the other standard methods has been the interference with their accuracy resulting from exogenous iodides. This is virtually eliminated in the T-3 Erythrocyte Uptake test. Because of this it is possible to assess thyroid function under conditions previously not possible by other methods. It is an excellent method for following patients on replacement therapy, antithyroid drugs and after radioactive iodine therapy. Since it does not involve the administration of radioactive material it is exceptionally well suited to studies on children and pregnant women. In addition it has been found to have certain characteristic variations in a number of diseases other than of the thyroid, which thereby adds to its value as a diagnostic tool for the physician. All of this is not to suggest that the T-3 Erythrocyte Uptake test has relegated the standard laboratory tests to the background. It merely provides an additional, rapid, inexpensive and highly accurate index of thyroid function which has certain distinct advantages. It is still desirable to support the diagnosis, in many cases, with one or more of the standard tests.

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# A Clinical Evaluation of a New Sulfonamide: Sulfachloropyridazine

**A review of the literature and the clinical evaluation of sulfachloropyridazine in 120 patients for various inflammatory conditions of the genitourinary tract are presented.**

**Dr. Nicolai limits his practice to urology.**

Sulfonamides have stood the test of time, and their development has continued through the years. They are particularly useful for urinary infections in view of their high concentration in the kidneys and in the urine. Furthermore, the ability of bacteria to develop resistance to antibacterial agents and the alteration of infection patterns encourages varying the chemotherapeutic agent and reserving the use of antibiotics for those situations in which they are specifically indicated. A recent search of continental medical literature reveals that a new sulfonamide, sulfachloropyridazine* (SCP), has undergone extensive scrutiny because of its reported high antibacterial activity and particular physiochemical properties.

This presentation is a review of the literature and a clinical evaluation of SCP in 120 cases treated by me for various inflammatory conditions of the genitourinary tract.

### Preliminary Considerations

Most recent sulfonamide developments have been directed toward reducing the required dosage schedule by delaying excretion and/or providing more active derivatives. The former approach has been successfully pursued and a number of compounds produced. However, when problems of drug sensitivity are encountered with these compounds, the reactions have often been distressingly prolonged, due, no doubt, to retarded clearance. Furthermore, in the area of urinary tract infections, their prolonged presence in the blood with attendant reduction in urine levels have detracted from one of the desirable attributes of the sulfonamides.

The literature[1-19] survey indicated that SCP has particular characteristics which mark it as a most promising compound to examine for the alternative approach, namely, that which is based upon marked antibacterial action against the most common urinary pathogens combined with prompt urinary excretion and high solubility in the urine. This would seem to be of distinct advantage to the urological patients.

SCP's solubility in aqueous media is about 25 times that of sulfadiazine.[1, 11, 15, 17] Rapid absorption from the gastrointestinal tract permits the attainment of high blood levels soon after oral administration. Maximum blood levels are noted one to three hours after oral ingestion with much lower levels being apparent after 12 hours. This prompt clearance is reflected in the early appearance of SCP in the urine, maximum values being reached in three to five hours. More than 85 per cent of the initial dose is excreted in the urine in the first 24 hours.[14, 15, 17] Both animal and human studies confirm that urinary excretion accounts for 100 per cent of the individual dose of SCP in 24 to 48 hours. When these findings are compared with those recorded for a typical "long-acting" sulfonamide, values one third of those for SCP are noted (fig. 1).[14] For the severe infection, the promptly excreted drug is the agent of choice.

Acetylation of SCP in urine varies with values of 8 to 28 per cent being reported. Other sulfonamides, particularly those where excretion is delayed, show substantially larger combined fractions.[1, 14]

In a series of more than 1,100 cases, not a single documented incident of crystalluria has been reported in the literature or the records on file with the manufacturer.[2] With the exception of two cases of transient leukopenia occurring in elderly patients, no hematological aberrations have been reported by any investigators.[6, 7, 10, 11, 17, 18] Examination of reports on side effects (dermatitis, gastrointestinal upset, headaches) reveals a low incidence of serious difficulties

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* SONILYN™ Mallinckrodt Chemical Works.

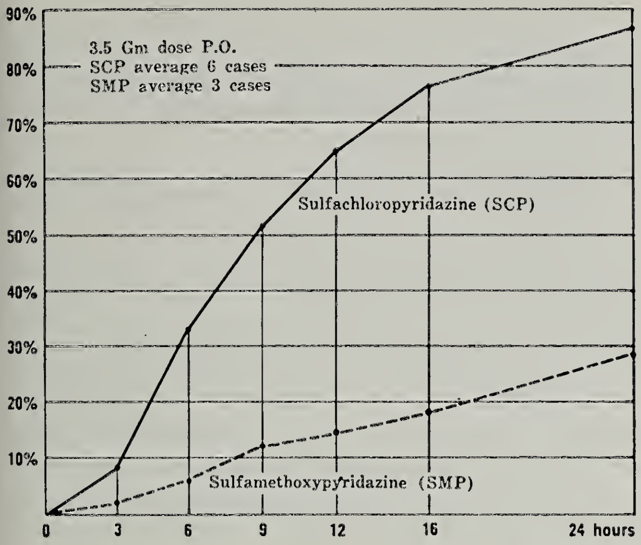

**Fig. 1.** Comparative excretion rates. Total urinary sulfonamide in percentage of original dose.[14]

often associated with sulfonamide therapy.[2, 3, 5, 15, 17]

SCP displayed more effect than other commonly used sulfonamides against a broad bacterial spectrum. Organisms tested included: Strep. Pyogenes, Staph. aureus, Pseudonomas, and especially E. coli. E. coli (as shown in figure 2 and table 1) appears to be most sensitive to SCP, which displayed an activity two to 25 times greater than other sulfonamides tested.[9, 11, 12, 13] Proteus and Pseudomonas, as usual, were more resistant to SCP as well as to the other sulfonamides.

This review of the literature and collected data on file with the manufacturer led to a clinical investigation since there appeared to be substantial reasons for concluding that SCP is:

1. Highly soluble at the usual urinary pH's.
2. Rapidly absorbed from the gastrointestinal tract, leading to prompt blood levels of the drug after oral administration.
3. Rapidly excreted by the kidneys in large amounts without a single case of crystalluria having been reported.
4. Noted for its high urine levels early after oral administration. This route of excretion accounts for the total elimination of the drug in 24 to 48 hours.
5. Effective against both Gram-positive and Gram-negative bacteria, with E. coli being more sensitive to this sulfonamide than to most others. Proteus and Pseudomonas were, as usual, more resistant.
6. Well tolerated—only two cases of transitory leukopenia in elderly patients were observed. These are the only hematological difficulties encountered in more than 1,100 cases reported to date.
7. Apparently effective with a convenient dosage schedule—about 3 grams per day in divided doses.

## Results of This Investigation:

In order to obtain a preliminary impression of the efficacy and tolerance of this compound in routine urological practice, SCP was administered to 120 patients for a variety of genitourinary inflammatory conditions including acute and chronic prostatovesiculitis, acute and chronic urinary tract infection, epididymo-orchitis, periurethral abscess, chronic urethritis (both male and female) and following genitourinary tract surgery. All infections that were treated and herein reported were due to a Gram-negative bacillus as determined by a stained smear of the centrifugation sediment. These included Coliform, Proteus and Paracolon organisms. Two or 3 grams per day were used in equally divided doses at six or eight hour intervals, the lower dose for "long-term" therapy patients; a few

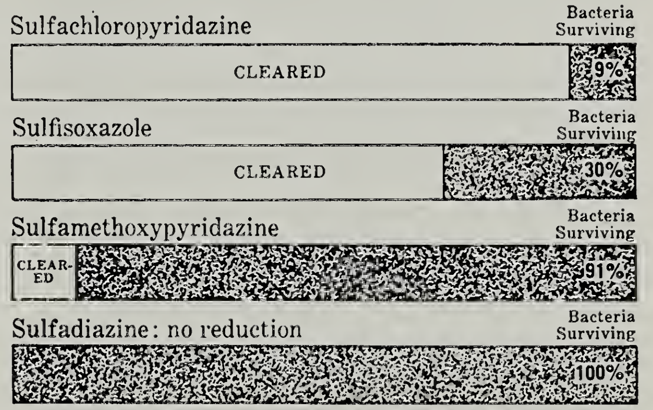

**Fig. 2.** Urinary disinfection "in vivo" 10 mg./kg. P. O. in rats. One week of treatment. Clearance of bacteria from the urine; counts of surviving E. coli.[11]

### TABLE 1
### CHEMOTHERAPEUTIC EFFECT "IN VIVO" MICE INFECTED WITH E. COLI 205

50 mg./kg. orally. Daily dose for six days.
Percentage survival after 10 days.

| | *Per Cent* |
|---|---|
| Sulfachloropyridazine | 80 survived |
| Sulfadiazine | 67 survived |
| Sulfamethoxypyridazine | 67 survived |
| Sulfisoxazole | 50 survived |

severely ill patients received 4.0 grams per day. It was not found necessary to use a loading dose with this antibacterial agent in view of its rapid absorption which provides prompt high blood and urine levels. Of these 120 cases, 94 were considered improved. Of these 120 patients, 17 were given the drug "prophylactically," such as following instrumentation. The seven cases which did not show improvement usually were those with chronic infection associated with calculi and chronic obstructive uropathy in which maintenance of clinical good health was happily accepted in place of "cure." The side effects noted included one case of nausea and one case of palmar dermatitis, both of which necessitated discontinuance of the drug. Another patient reporting nausea did not experience recurrence when the drug was re-administered. One patient reported having a headache on several trials with the drug. Crystalluria was not observed. Two patients reported excessive flatulence while under treatment. In view of the work previously carried out with this compound, hematological monitoring was not employed. Patients received SCP for periods ranging from a week to several months. The longer periods of therapy and/or repeated courses of therapy did not appear to lead to any increased incidence of adverse side effects.

## CONCLUSIONS

A newly available sulfonamide has been introduced in the form of sulfachloropyridazine, which has been extensively studied and reported in the European literature. This clinical evaluation substantiates the impression gained from the literature that this is an effective agent at dosages intermediate to those traditional with the sulfonamides and those customary with the "long-acting" compounds. Of 103 patients in whom relief of their infection was sought, 94 were improved, while nine were not. Tolerance appeared to be excellent.

## SUMMARY

The attributes of having a broad spectrum of susceptible bacteria, high solubility, high blood and urine levels appearing promptly after ingestion, convenient dosage schedule, and safety (i.e. no incidence of crystalluria and few adverse side reactions) substantiate the impression gained from a review of the literature and the experience of this evaluation that SCP will be a valuable addition to the sulfonamide group of drugs now available for the treatment of genitourinary infections.

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**IAN M. THOMPSON, M.D.,** ***Columbia***

# Urologic Emergencies in the Pediatric Age Group

**Several conditions calling for emergency action in infants are discussed, as well as treatment, including scrotal swelling, abdominal masses, imperforate anus and urethrorectal fistula, are discussed.**

**Dr. Thompson is Professor of Urology at the University of Missouri School of Medicine.**

WEBSTER'S DEFINITION of emergency as an unforeseen combination of circumstances which calls for immediate action has a certain poignancy for the surgeon since the embarrassing aura of iatrogeny may surround certain of these unexpected vicissitudes. I shall therefore leave until last any mention of postoperative emergencies and discuss some conditions in pediatric urology which I consider to be of an urgent nature.

Of all causes of scrotal swelling in infants and children, torsion of the spermatic cord is certainly one of the more frequent and poorly documented. The actual incidence of torsion obviously greatly exceeds the number which are reported. Of possible significance in this regard are the many instances of unilateral testicular atrophy in the adult male population in which no history of traumatic or infectious orchitis can be obtained.

It would seem inconceivable that a process which is allegedly as painful as torsion should pass unrecognized, and yet this may often occur. Several reasons can be advanced for this ostensible lack of recognition. In an infant the mother may fail to appreciate the significance of the moderate swelling of the scrotum and attribute the child's fussiness to other causes. In older children the discomfort, tenderness and swelling may simply be ascribed to trauma and the child put to bed. Particularly in the younger children, I have often been impressed with the relatively mild scrotal swelling which can be incurred by spermatic cord torsion.

In many instances the suspicion, engendered by the minimal tenderness, that torsion has been present for a good period of time, is confirmed at exploration by gross evidence of a subsidence of the acute engorgement process.

Of great interest are the number of patients who are eventually operated upon for torsion who have historical evidence of previous episodes of a similar nature which were spontaneously relieved.

It is my feeling, supported by recent experimental evidence,[1] that the real reason for diagnostic uncertainty and concomitant poor salvage of testes in which spermatic cord torsion occurs is related to the delay in occurrence of physical signs of torsion in experimental animals until congestion induced by relative venous obstruction gradually increases to the point of venous occlusion and impingement upon the arterial supply. It has never seemed logical to me that the minor degrees of rotation which are seen at exploration in most instances of torsion could cause the sudden cessation of venous return or the rapid arterial compression which the near gangrenous condition of the testis at operation might imply (fig. 1). It would seem more reasonable to assume that a prolonged rotation of the

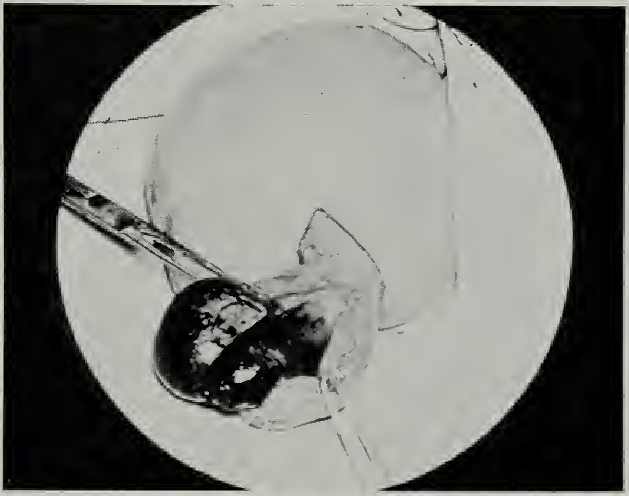

Fig. 1. Note gangrenous testis below torsion of cord.

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[1] Lapides, Jack: Personal communication.

cord productive of a relatively asymptomatic period of venous congestion may pertain and may more nearly represent the pathogenesis of the process which culminates in the clinical picture of acute torsion. In this light, spermatic cord torsion may be thought of as a most urgent emergency since the morbid process may well have been initiated long before the onset of clinical symptoms. The frequency of orchiectomy as the therapeutic procedure in the majority of reported cases attests to the lateness of the diagnostic hour in the great proportion of children in whom the condition has occurred (fig. 2).

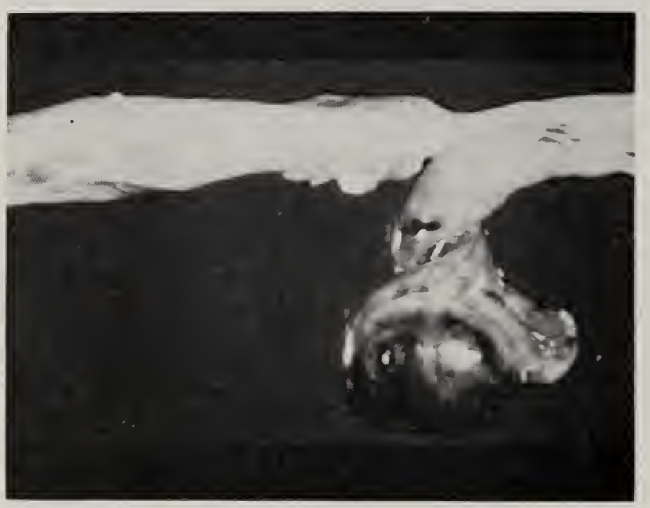

**Fig. 2. Gangrenous testis removed following 180 degree cord torsion.**

Rather than imply that surgical exploration is of no more than diagnostic and gonadal ablative value in this condition, I should like to stress the need for even more precipitous operative intervention in any instance of scrotal swelling, mild or sporadic testicular discomfort, or even when a past history suggestive of torsion is encountered. Scrotal content trauma, epididymitis, hernias, hematoceles and tumors will not be made worse by exploration and the patient can only benefit from the establishment of the proper diagnosis.

It has been well documented that the many deficiencies in gubernacular, mesorchial and cord attachments which appear to be responsible for spermatic cord torsion are almost invariably present in the contralateral scrotal compartment[2] and there is now little argument as to the necessity for prophylactic fixation of the opposite testicle to the posterior scrotal wall at the time of discovery of the testicular torsion.

To continue in the area of emergencies and masses, I should like to devote a few nihilistic words to the management of abdominal masses in childhood.

Spurred by Bostonian dogma and ritual, the approach to any abdominal mass in a child in the recent past has been one of not only diagnostic urgency but when the possibility of a Wilms tumor exists of an immediate count down to launch into the surgical or radiotherapeutic technics for tumor removal. In some instances it has been only barely possible to rescue a child with a hydronephrotic mass in the abdomen from the radiotherapist's couch. In others, urgent exploration has led to a tedious intraperitoneal disentanglement of that primarily retroperitoneal structure, the dilated redundant ureter of obstructive uropathy (figs. 3, 4, 5). It is not my intention to decry early diagnosis and treatment in any pathologic condition in children, but I

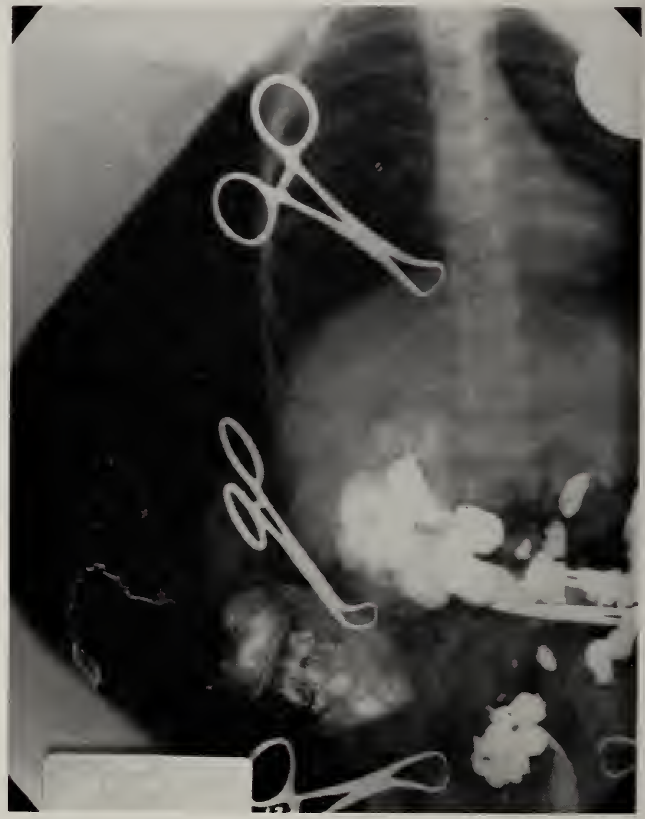

**Fig. 3. Ureterogram made at operation after lengthy dissection of dilated loops of unknown origin. (Redundant ureter.)**

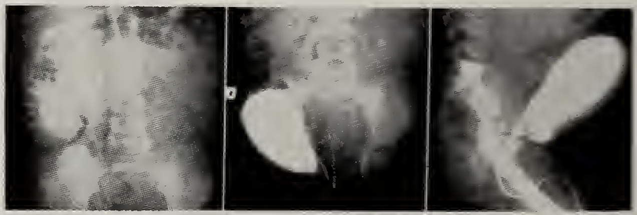

**Fig. 4. Right hydronephrosis, marked displacement of bladder to right and anteriorly due to dilated left ureter, producing abdominal mass.**

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[2] Johnson, Neil: Torsion of Testes: A Plea for Bilateral Exploration, M. J. Australia **1**:653 (April 23) 1960.

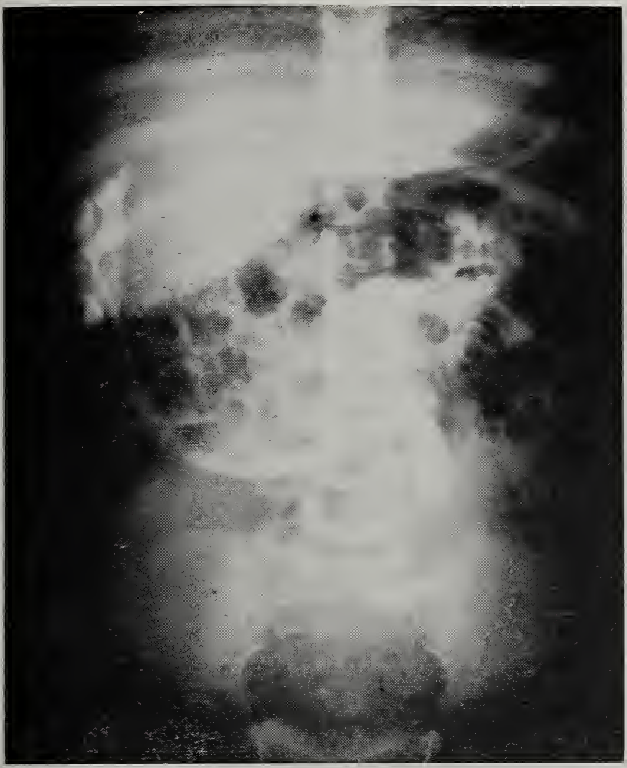

**Fig. 5. Child with abdominal mass causing marked displacement of right kidney and ureter. Loin pressure caused extrusion of pus from ectopic paraurethral orifice of a right upper pole duplication.**

do object to the intimidating aspects of a mandate that an abdominal mass requires less than a painstakingly thorough diagnostic survey. The notion that only the chief of the service should gently palpate the child's mass and then prescribe a middle-of-the-night diagnostic work-up and surgical exploration is at variance with my observation of the customary forces to which the abdominal contents of the average child are subjected from day to day. My plea is for prompt, but thorough and considered, diagnosis, and subsequently therapy which has been properly prepared for. The number of post surgical deaths in children subjected to emergency tumor surgery which are attributable to a failure to bring the child to appropriate fluid, electrolyte and caloric balance may not readily be apparent from the literature but from my own observations may be considerable. The cases which are illustrated are not unusual examples of the fallacy of excessive haste in these instances. I feel that they emphasize the need for adherence to customary principles of diagnosis, for multi-discipline consultation and finally appropriately timed treatment.

A similar situation may pertain in regard to the problem of imperforate anus. Although it is considered to be an intestinal and surgical emergency, I would demur in this view and contend that in many instances it is primarily a urologic emergency. The assumption that the lack of an anal opening in a newborn infant constitutes a situation which must be dealt with precipitously has undoubtedly been responsible for most of the crippling urogenital morbidity associated with ill considered surgical assaults upon the non-patent perineum.

The prevalence and severity of urogenital anomalies which occur in conjunction with imperforate anus has been so thoroughly documented it would appear inconceivable that the diagnostic and therapeutic urinary tract prerequisites should still be overlooked. The urinary tract provides the greater proportion of associated malformation owing to the prevalence of fistula. The most common finding is urethrorectal communication in male infants (fig. 6). Vesical and ureterorectal fistulas occur in both sexes but much less frequently. The interposition of the Mullerian duct system is responsible for the diminution in urinary intestinal fistula and attendant sparsity of morbidity seen in females.

The many other urinary tract anomalies which may appear in conjunction with imperforate anus are in some instances of no importance but in others should take precedence in the rehabilitative schedule proposed for the child. A large number of the male children will have vesical outlet obstruction in addition to an attachment —patent or not—between the urethra and the rectum (fig. 7). In both sexes congenital obstructive uropathy unrelated to the intestinal

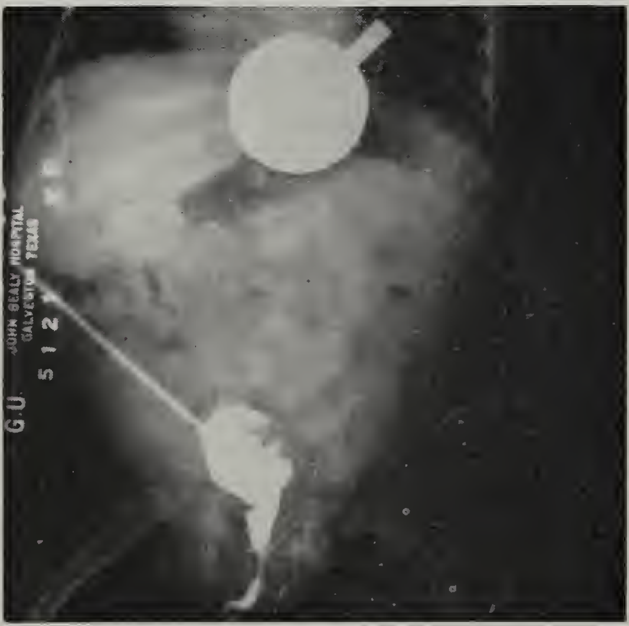

Fig. 6. Cystourethrogram showing urethrorectal fistula in imperforate anus. Injection via cystostomy tube.

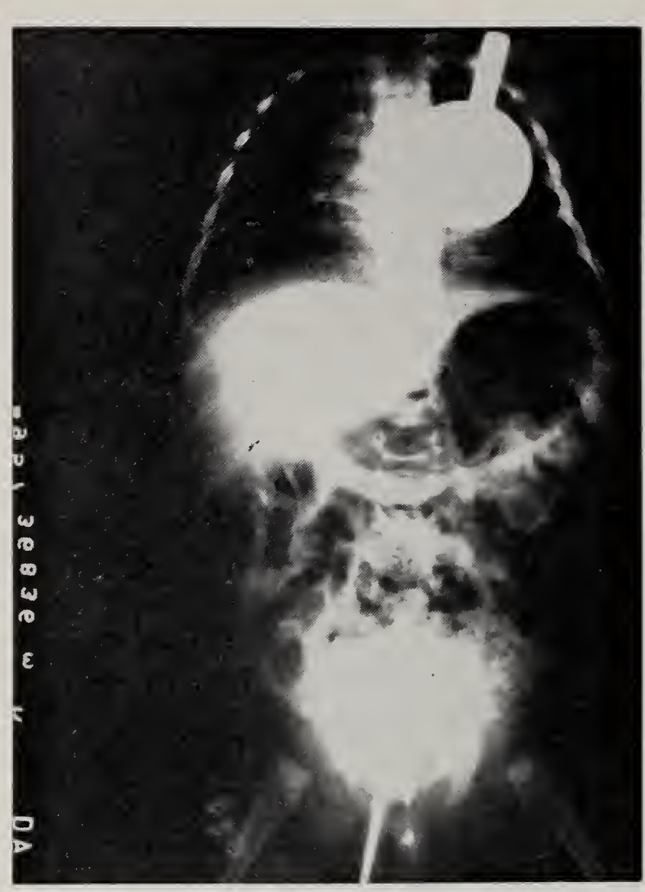

Fig. 7. Cystourethrogram via cystostomy tube shows characteristic vesical neck contraction and post stenotic dilation of urethra in child with imperforate anus.

abnormality is sufficiently frequent to mandate a thorough urologic survey.

From the diagnostic aspect the most urgent feature in cases of imperforate anus is the architectural and functional status of the urinary tract. Rarely is the child in so desperate a physical state owing to the lack of an anal opening that the brief period necessary to study the urinary tract cannot be spared.

In some instances the presence of a patent urethrorectal fistula may be indicated from the history if meconium has been noted in the urine. A satisfactory urinary stream and a clear urine are conversely not a guarantee that a fistula is not present. Even in the female the presence of a rectovaginal fistula does not negate the possibility of a concomitant rectovesical or rectoureteral fistula.

Urethral catheterization must be the first step in all instances of imperforate anus. Even the newborn male urethra can accommodate the 8 French balloon catheters which are presently available. The urine withdrawn from the bladder can be analyzed for infection or fecal particles and subsequently a retrograde cystogram should be carried out to search for ureteral reflux (fig. 8), fistula or other abnormalities. With dye in the bladder the inverted films made for estimation of the relationship of the rectal gas bubble to the perineum can often be better interpreted. Excretory urography is not harmful in the new born infant and with the newer media, which are transported primarily by glomerular filtration, opacification of the conduit system is usually remarkably good. If the upper urinary tracts are normal the remainder of the examination should include a voiding cysto-urethrogram produced by overfilling the bladder with dye, removing the catheter and taking the x-ray as the child is voiding. This often produces better filling of a fistula or delineation of outlet abnormality than the retrograde urethrograms. However it is wise to perform a urethrogram to make sure no fistula exists. The urologic examination should take no more than an hour and the results of such a study may permit the avoidance of a life time of genitourinary morbidity.

The therapeutic urologic emergency entailed by imperforate anus is on the one hand related to prompt correction of significant abnormalities or expedient urinary diversion to prevent renal function deterioration and, on the other, to the

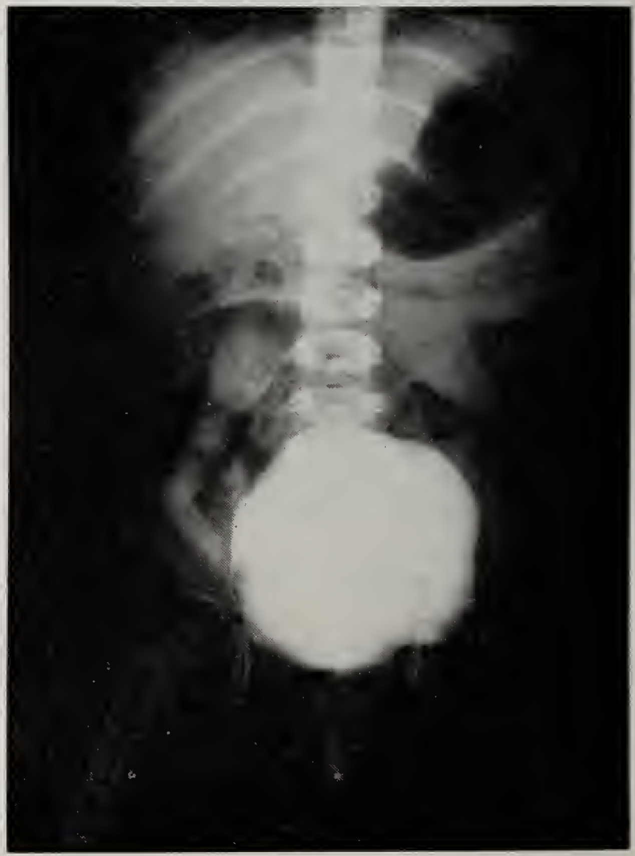

Fig. 8. Cystogram demonstrates a dilated bladder and ureteral reflux secondary to vesical neck obstruction in a child with imperforate anus.

prevention of urinary tract damage by modifying the operative approach to the blind end of the intestine when a fistula exists or is suspected. The many disastrous consequences of the perineal approach to the blind end of the colon have been duly recorded and have fostered the popularity of either preliminary colostomy or an abdomino-perineal procedure. Only with a combined technic can these serious lower urinary tract defects be well visualized and only in this manner may the surgeon stay away from the fragile posterior urethra. There is usually a superfluity of intestine which may be sacrificed and urethral continuity will invariably be satisfactory if normal bowel is brought into apposition with the site of the fistula.

In other words there should never be any attempt made to dissect out and close a tiny fistulous stalk attaching in the posterior urethra since recurrence of fistula or scar will almost invariably occur. The greatest care to avoid manipulation of the urethra and vesical outlet should be maintained since this is the location of the mechanism for urinary continence. Stricture here can be a calamitous occurrence.

In every instance of imperforate anus the emergent urologic aspects should have primary consideration. Complete evaluation of the urinary tract must precede surgical assault upon the bowel and the operative procedure chosen must not devitalize or scar the tissues involved in normal micturition control.

The well known pediatric adage which warns against viewing infants and children as small adults is illustrative of the truths, fallacies and inconsistencies inherent in all aphorisms.

The ever increasing involvement of the urologist in experimental and clinical renal physiology has stimulated the suspicion in genitourinary surgical circles that the basic principles of renal physiology apply equally as well to study and management of the juvenile kidney as they do to the dysfunctions encountered in the elderly prostatic patient. The diffidence with which surgeons have approached the management of fluid and electrolyte aberrations in the critically ill child with renal disease is the last of the urologic emergencies I should like to touch upon. Whether the pediatrician has nurtured the withdrawal of the surgeon in this area or has simply filled the therapeutic void is of little importance. The real need is for the urologist who weds mechanical reconstruction with practical and theoretical physiology, to join aggressively in the nonsurgical portions of the management of these problems in an attempt to insure the maximum homeostatic benefit possible.

Urologists have had constant opportunity to observe the deleterious aspects of surgical and anesthetic stress on renal function and should perhaps be best qualified to assess the hazards of such burdens in both adults and children with depressed renal reserve. The effects of obstruction upon glomerular filtration, renal blood flow and tubular transport processes are of everyday concern to the urologist and often he is better able to judge the manner in which the therapy of homeostatic aberrations should proceed.

Illustrative of this is a child who was operated upon for vesical outlet obstruction after a long period of bladder drainage had permitted sufficient return of renal function to apparently warrant the risk of anesthesia and surgery. In the postoperative period the care of the child was more or less relinquished to the pediatricians who were misled into a course of inaction by the child's initially satisfactory general appearance. A sodium diuresis occurred which is not unusual in this type of post obstructive kidney damage. With the usual isotonic intravenous solutions which were administered the severe depletion of sodium, chloride and bicarbonate reached spectacular low points before the child became clinically hyponatremic. Anemia then developed and the round-table discussion centered about how cautiously all of these factors should be handled. Complete caution prevailed and the dilute salt solutions administered never satisfied the child's hypovolemia, hyponatremia or specific lack of red cell mass. Despite warnings regarding the cardiovascular and renal catastrophes which would surely ensue in a child if a vigorous therapeutic correction of these deficiencies were attempted, the surgeons responsible for the patient did prevail and I should like to be able to report that the boy lived happily ever after. A staphylococcal septicemia eventually overwhelmed the child but the physical findings following the repletion of proper tonicity, circulating volume and cell mass gave immediate evidence that this should have been carried out immediately and rigorously when first noted. This is not meant as an allegory reflective upon the merits of surgeons or pediatricians. I mention it only to emphasize the need for surgeons to involve themselves as deeply as possible in the total care of the patient so that the pediatrician, who cannot be as cognizant of the various surgical and anesthetic effects upon organ systems with which the surgeon has constant dealings, may be less likely to overlook postoperative aberrations which can lead to disaster.

Medical Center

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# Finger Fractures

**The principles underlying the successful treatment of finger fractures including reduction of the fracture, splinting and rehabilitation of the hand are discussed.**

**Dr. Workman is an orthopedist.**

Finger fractures are frequently neglected and it must be emphasized from the beginning that a finger fracture is not necessarily a simple fracture, the treatment uncomplicated or the results always satisfactory. To facilitate understanding of finger fractures, one must review surgical anatomy.[1]

The phalanges of the fingers are miniature long bones. Unlike the other long bones, however, the fingers are not covered by any muscle. Because the fingers have no muscles covering the bony structures, any angulation, rotation, overriding or any combination of these deformities becomes immediately obvious once the swelling subsides.

The flexor digitorum profundus, flexor sublimus, dorsal and volar interosseous, lumbricales and extensor tendons all insert into the fingers. The mechanism of these tendinous insertions are frequently complex. Some of the muscles inserting into fingers are both flexors and extensors.

Another anatomic fact worth noting is that the fingers articulate proximally with the metacarpal heads. This articulation is a condyloid joint. No rotation in flexion is ordinarily possible in these joints. Therefore, only flexion, extension, abduction and adduction are present in the metacarpal phalangeal joints of the fingers. Abduction and adduction are not possible in full flexion.

Also, worth noting, as the fingers flex, they all converge. This convergence of the fingers centers about a point which is approximately the tubercle of the navicular bone. This tubercle is easily palpable in the unswollen hand and is found just distal to the distal end of the radius on its palmar aspect. Any rotary or angular deformity which persists after reduction of fractures will interfere with this normal convergent motion and will be a cause of disability.

The third anatomic fact that bears mentioning is that in each finger, except the thumb, two large tendons enter the finger in a closely fitting tendon sheath. Any damage to the tendon sheath or tendon, at the time of the fracture, will result in adhesions at the fracture site and limitation of motion in flexion or extension or both.

It may be worth while to compare a fractured finger with a fractured femur to bring out certain differences between the two fractures. The finger has no muscle bellies surrounding the shaft of the bones. The femur is covered medially, laterally and posteriorly by large muscle bellies. For this reason, angulation of a mild degree or overriding is not obvious, clinically, in the femur, and is obvious, clinically, in fractured fingers.

The fourth difference between the fractured finger and the fractured femur is that callus appears early in most fractured femurs. Callus ordinarily appears between four and six weeks in the fractured femur. The fractured finger ordinarily heals with minimal callus and usually months elapse before callus is seen.

## The Principles of Successful Treatments of Finger Fractures

The principles underlying the successful treatment of finger fractures are (1) reduction of the fracture, (2) splinting of the fracture, and (3) rehabilitation of the hand after the fracture has clinically healed.

## Anesthetic for Finger Fractures

Most finger fractures can be satisfactorily reduced under local anesthesia. One per cent procaine is a satisfactory anesthetic solution and should be introduced at the site of the volar and dorsal digital nerves. Adrenalin in the anesthetic solution may cause spasm of the digital arteries and should not be used.

## The Reduction of Finger Fractures

Finger fractures are reduced in a manner similar to reduction of other fractures. Specifically, a combination of traction and angulation in a direction opposite the deformity are usually required. If the x-ray shows shortening, then traction is indicated. If a fracture is both shortened and angulated, then both traction and counter angulation are required. If a fractured finger is rotated, then the correction of rotation is extremely important. It is difficult to judge rotation in fractured fingers. The x-ray cannot be used as a guide in correcting rotary deformity. Correct rotation of the finger fracture may be ascertained by glancing at the nail previous to reduction. It will be seen, as one glances at his own hand, with the fingers in the flexed position and the tips of the fingers pointing toward one's self, that the plane of the finger nails is the same. Thus, the nails are the only reliable guide to rotation which can be depended upon in the swollen finger. Failure to correct rotation will cause interference with function and considerable clinical deformity.

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[1] Gray's Anatomy, 23rd Edition, page 326.

The proximal phalanx of the finger is a problem in itself. Many people have encountered difficulty in reducing fractures of the proximal phalanx of the finger due to the fact that abduction and adduction occur easily at the metacarpal phalangeal joint. There is considerable difficulty encountered in correcting angulation, especially if it is near the joint. A simple maneuver makes the fracture of the proximal phalanx relatively easy to correct. First, flex the finger. phalanx is locked; then angulation in a direction opposite the deformity and traction immediately become more effective and it usually is relatively easy to correct the proximal phalanx fracture. Failure to reduce these fractures in flexion is the cause of many failures.

### TYPES OF FINGER FRACTURES

Finger fractures may be classified as:

A. Stable.

B. Unstable (oblique and comminuted).

One may note at the time of reduction whether the fracture is stable or unstable. This information may be ascertained from the x-ray and "feel" of the fracture at the time of reduction. Finger fractures which are stable require reduction and splinting in flexion. Finger fractures which are unstable require reduction. This is performed in the usual manner and is maintained by instituting traction in flexion. Deformity will recur if traction is not maintained until clinical union occurs.

### SPLINTING OF FINGER FRACTURES

Finger fractures should almost always be splinted in flexion.* The principle reason for the splinting in flexion has nothing to do with the fracture but has to do with the collateral ligaments (fig. 1) of the fingers and metacarpal phalangeal joints. These cross the metacarpal phalangeal joint and the proximal and distal interphalangeal joints on the lateral aspect of each joint.

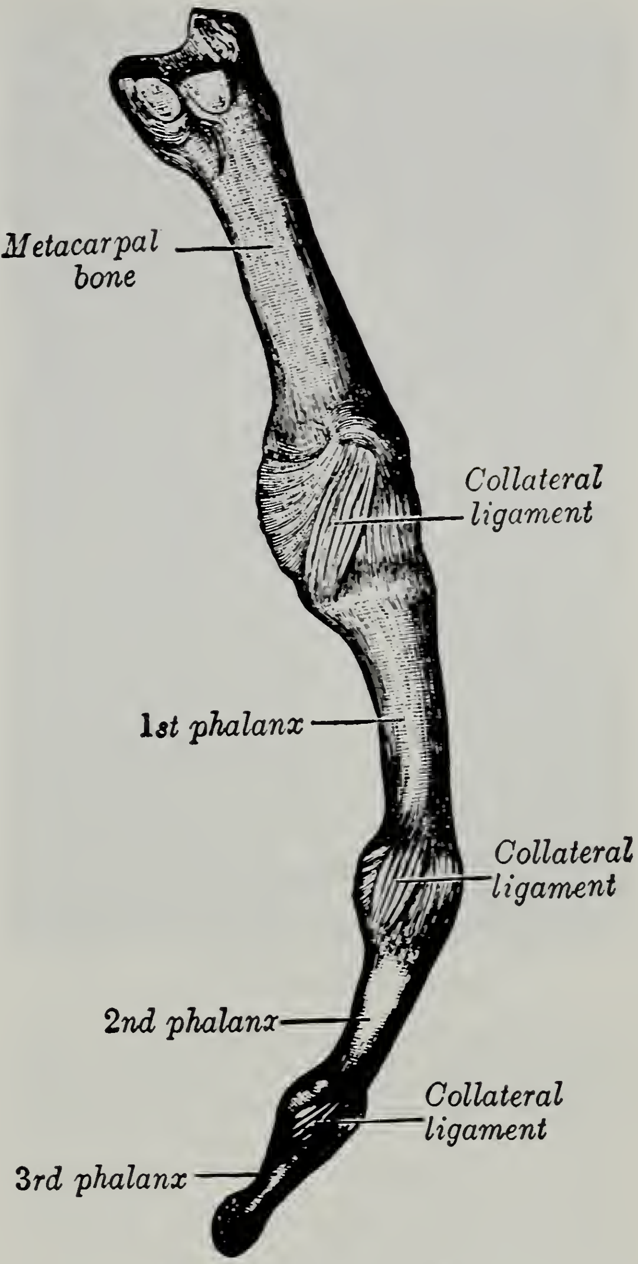

Fig. 1. Anatomy of the finger.

These collateral ligaments are longest in the flexed position and shortest in the extended position. Splinting these ligaments in extension causes the collateral ligament to be shortened and this shortening is frequently irreversible and prevents flexion.

A finger that is stiff in extension is not a useful finger, is clumsy, acts as a bumper and prevents normal use of the hand. Therefore, the patient

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* Fractures of terminal phalanx, baseball fractures and Bennett's fractures do not require flexion.

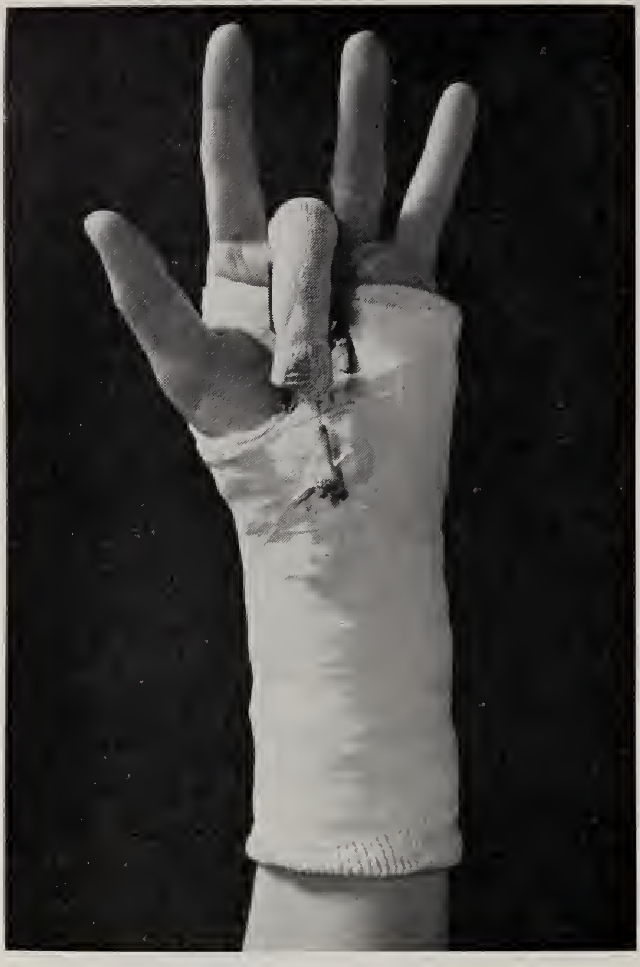

Fig. 2. Splinting of the finger.

frequently will request amputation. For these reasons, nothing can be more emphasized in the treatment of finger fractures than the splinting in flexion.

The second reason for splinting in flexion has to do with the dynamics of the tendons which cross the fracture. When a finger is flexed, the flexors and extensors tend to assume a dynamic equilibrium cancelling out each other. In the extended position, the flexors and extensors are dynamic deforming forces and tend to angulate the finger fracture.

## Length of Splinting

Finger fractures ordinarily should be splinted from two and one-half to three and one-half weeks. Since callus appears late in finger fractures, the x-ray appearance of the finger has nothing to do with the time the finger is released from splinting. Therefore, it is clinical union which one must ascertain before discontinuing the splinting. It is my policy to splint approximately three weeks for most finger fractures. If it is felt that the finger is still slightly unstable after this period of time, discontinue the splinting and tape the injured finger to the adjacent digit. This allows some degree of splinting but also allows early motion. The finger splinted beyond the optimum time almost never returns to normal. The surgical treatment of the patient with a stiff finger is usually unsatisfactory both to the patient and doctor.

## Rehabilitation of the Hands

It is not sufficient just to reduce and splint a fracture no matter how adequately this is done. The doctor's work is not complete until the patient has regained the maximum use of the hand. The only therapy that is ordinarily required after a finger fracture is warm soaks and active motion. It is frequently desirable to have the patient return to work as early as possible as the regular use of the hand is extremely helpful in mobilizing the hand. Finger fractures which are angulated, comminuted or in which there is overriding, usually result in some permanent disability. One can visualize a finger in which there are two tendons in a tight sheath and in which angulation and overriding occur.

It is easy to realize the damage which is done to the tendon sheath or tendons at the time of fracture. Adhesions between the tendon sheath and the tendons is the logical outcome, with limitation of flexion and extension. Some permanent disability in severe finger fractures should be anticipated from the beginning. This is the rule and not the exception. The patient who anticipates a permanent disability is not surprised when it occurs. When he does not anticipate it and finds that it has occurred, the patient frequently bears much ill will against the doctor.

In analyzing a series of finger fractures for the cause of poor results, the following factors may be found: (1) poor reduction, (2) failure to correct rotation, (3) splinting for too long or for too short a period (less common).

## Poor Reduction

The causes of malposition of the fracture fragments are essentially either failure to obtain the reduction initially or subsequent failure to maintain the reduction. Many doctors assume that because a fractured finger is reduced it will stay that way. If the fracture is unstable by reason of comminution or obliquity of the fracture, then reduction alone is not adequate; in addition to reduction, traction is required to maintain it.

Splinting the finger in extension brings into play dynamic forces in which certain of the mus-

*(Continued on page 1080)*

**FRANK NASO, M.D., WILBUR W. OAKS, M.D.,**
*and* **JOHN H. MOYER, M.D.,** ***Philadelphia, Pa.***

# Treatment of Severe Hypertension and Hypertensive Emergencies

**Severe hypertension and hypertensive emergencies are defined. What is needed in treatment is discussed and various drugs that serve in differing instances, with their reactions, are presented.**

**Drs. Naso, Oaks and Moyer are from the Department of Medicine, Hahnemann Medical College and Hospital, Philadelphia, Pa.**

A HYPERTENSIVE emergency is that situation in which marked elevation of the blood pressure is a direct threat to life. There are two categories: (1) those associated with essential hypertension, and (2) those associated with high blood pressure resulting from other disease processes such as renal disease, toxemia of pregnancy or pheochromocytoma.

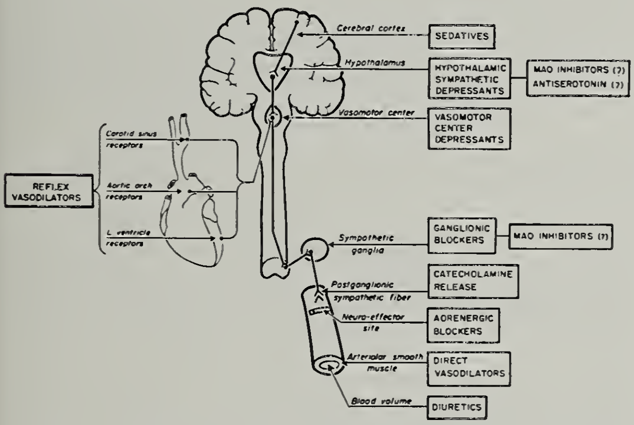
Cerebral cortex
SEDATIVES
Hypothalamus
HYPOTHALAMIC SYMPATHETIC DEPRESSANTS
MAO INHIBITORS (?)
ANTISEROTONIN (?)
Vasomotor center
VASOMOTOR CENTER DEPRESSANTS
Carotid sinus receptors
REFLEX VASODILATORS
Aortic arch receptors
L. ventricle receptors
Sympathetic ganglia
GANGLIONIC BLOCKERS
MAO INHIBITORS (?)
Postganglionic sympathetic fiber
CATECHOLAMINE RELEASE
Neuro-effector site
ADRENERGIC BLOCKERS
Arteriolar smooth muscle
DIRECT VASODILATORS
Blood volume
DIURETICS

Fig. 1. Diagrammatic representation of point of action of various drugs which reduce the blood pressure by depression of the sympathetic nervous system.

The ideal drug for use in such emergencies should offer: (1) rapidity of action, (2) potency, (3) ease of administration, and (4) easy control of blood pressure. A spectrum of drugs is available (fig. 1) and each particular drug has specific indications, such as ganglionic blocking agents or guanethidine in fulminating congestive failure, hydralazine in toxemia of pregnancy or acute glomerulonephritis, and reserpine for use where a delay of two or three hours is permissible.

Careful attention must be paid to renal function, for a uremic patient requires cautious low-

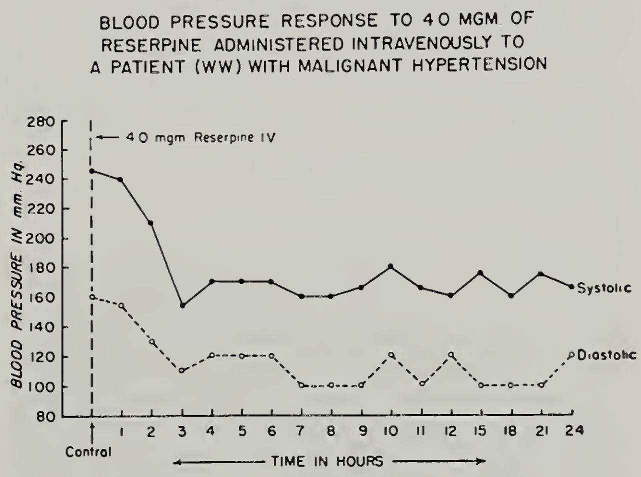

Fig. 2. The blood pressure response following parenteral administration of reserpine. The blood pressure was maintained at normotensive or mild hypertensive levels. One week after discontinuation of parenteral reserpine, pentolinium was added because of the gradual loss of adequate reduction in blood pressure.

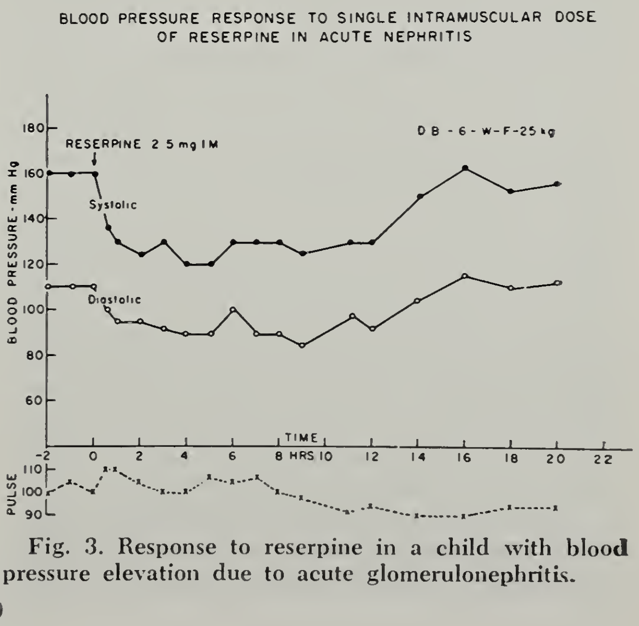

Fig. 3. Response to reserpine in a child with blood pressure elevation due to acute glomerulonephritis.

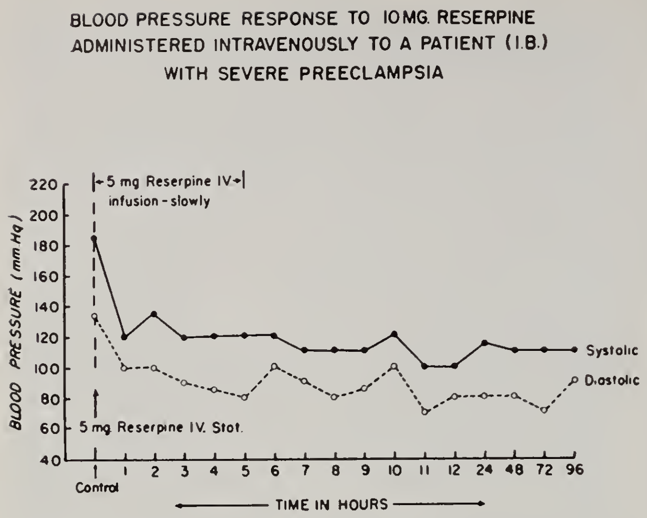

**Fig. 4. Blood pressure response to reserpine in a patient with toxemia of pregnancy.**

ering of blood pressure. The BUN is a simple means for this evaluation.

### Reserpine

Reserpine is probably the best single drug for treatment of hypertensive emergencies. When used parenterally it has a latent period of one to two hours, with the maximum effect in four hours and some effect up to 24 hours (fig. 2). It is equally effective whether the patient is supine or standing, whereas other potent drugs such as the ganglionic blockers have relatively little effect in the supine patient. One disadvantage of reserpine is the latent period of one to two hours, but this may be overcome by first administering a ganglionic blocking agent or veratrum and then using reserpine to sustain the hypotensive effect. In patients with hypertension associated with acute glomerulonephritis (fig. 3) or toxemia of pregnancy (fig. 4), reserpine given alone or in combination with hydralazine or veratrum is the therapy of choice. The dosage schedule for the treatment of children with hypertension due to acute glomerulonephritis is outlined in table 3.

The dose regimen of reserpine in adults begins with a 2.5 mg. injection. Two to four hours must be allowed for the maximal effect of the drug before another dose is given. If no effect is noted, the dose may be increased in 2.5 mg. increments until the desired effect is obtained. Thereafter, doses of 2.5 mg. every six to 12 hours must be given to maintain the desired effect. Individual doses should probably not exceed 10 mg., and the total dose given in 24 hours should rarely exceed 20 mg.

Two undesirable central nervous system side effects are a Parkinson-like syndrome and impaired celebration resulting in lethargy. Although both are transient and subside after the drug is discontinued, the latter may cause confusion in evaluation of the patient with cerebral hemorrhage or encephalopathy.

### Hydralazine

This drug is most useful in patients with renal disease since, by increasing cardiac output, it also transiently increases renal blood flow. Thus,

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## FINGER FRACTURES

*(Continued from page 1078)*

cles tend to angulate the fracture and the deformity frequently will recur in a splint or a cast in the extended position. Splinting in extension is mentioned only to condemn it. It has been mentioned previously that fingers are splinted in flexion to: (1) make the immobilization more satisfactory, (2) to prevent shortening of the collateral ligaments in the extended position. The x-ray is not entirely adequate in judging the reduction since it does not show rotation. The evaluation of correct rotation, after completion of reduction, is clinical judgement and is based upon the appearance of the nails.

Another cause of poor results in finger fractures may be listed as failure to correct angulation. This is not corrected by traction, but is corrected by bending in the opposite direction. Finger fractures, both angulated and shortened, then require both traction and angulation opposite the deformity. If the finger fracture is shortened, angulated and rotated, then correction of all three of these deformities must be obtained and maintained.

To emphasize the positive side of finger fractures, let me state in summary: always strive for a perfect reduction, i.e., correcting rotation, angulation, shortening and overriding. Splint the finger pointing toward the tuberosity of the navicular and only splint in flexion. Never splint too long and encourage the patient to move the fingers through a complete range of motion as quickly as possible compatible with the clinical union of the fracture.

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TABLE 1

OUTLINE FOR ANTIHYPERTENSIVE TREATMENT OF HYPERTENSIVE EMERGENCIES

| *Emergency* | *Initial Therapy* | | | | *Adjunctive Therapy When Initial Drug Inadequate* | *Maintenance Therapy (Post-Emergency)* |
|---|---|---|---|---|---|---|
| | DRUG | DOSE | ROUTE | FREQUENCY | | |
| Encephalopathy | Reserpine* | 2.5 to 10 mg. | IM | 4-12 hours | Pentolinium† 5 to 50 mg. I.M. If inadequate, then alkavervir titration by I.V. infusion | Chlorothiazide‡ + guanethidine** or ganglionic blocking agent |
| Fulminating heart failure | Pentolinium or Arfonad | 5 to 50 mg. Titration | IM<br>IV | 30 min. to 4 hr.—Continuous infusion | Reserpine I.M. or alkavervir titration by I.V. infusion | Chlorothiazide + guanethidine or ganglionic blocking agent |
| Intractable angina with severe hypertension | Pentolinium | 5 to 50 mg. | IM | 1-4 hours | Reserpine 2.5 mg. to 10 mg. given I.M. | Chlorothiazide + guanethidine or ganglionic blocking agent |
| Hypertensive crises | Reserpine | 2.5 to 10 mg. | IM | 4-12 hours | Pentolinium 5 to 50 mg. I.M. If inadequate, then alkavervir titration by I.V. infusion | Chlorothiazide + guanethidine or ganglionic blocking agent |

* Serpasil (Ciba) or Sandril (Lilly).
† Ansolysen (Wyeth).
‡ Diuril (Merck Sharp & Dohme) or equivalent thiazide derivative.
** Ismelin (Ciba).

it may be used with much greater safety than other drugs in patients with acute glomerulonephritis and toxemia of pregnancy. This drug is effective within 15 to 20 minutes, but the effect is transient, lasting no more than 12 hours. Therefore, it is desirable to combine hydralazine and reserpine, the first for immediate action and the second for prolonged effect (fig. 5).

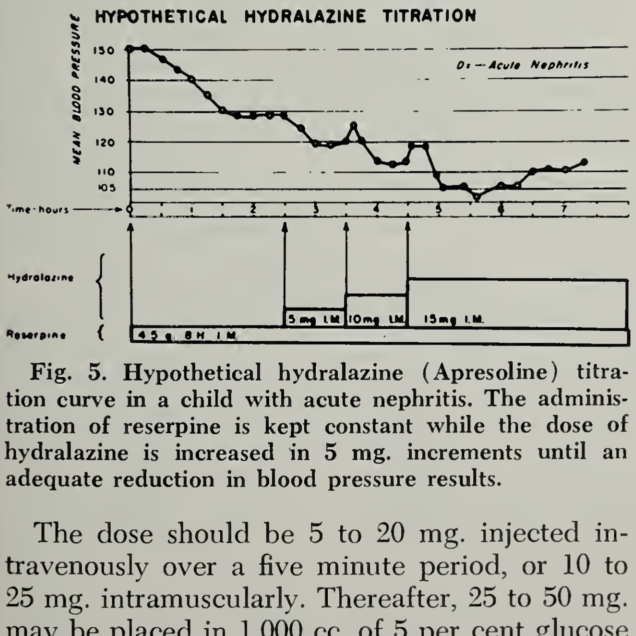

Fig. 5. Hypothetical hydralazine (Apresoline) titration curve in a child with acute nephritis. The administration of reserpine is kept constant while the dose of hydralazine is increased in 5 mg. increments until an adequate reduction in blood pressure results.

The dose should be 5 to 20 mg. injected intravenously over a five minute period, or 10 to 25 mg. intramuscularly. Thereafter, 25 to 50 mg. may be placed in 1,000 cc. of 5 per cent glucose and water and the rate of infusion controlled so that the desired effect is obtained.

## GANGLIONIC BLOCKING DRUGS

These drugs are potent antihypertensive agents and produce immediate and profound hypotensive effects. However, they have certain disadvantages. One is that they are most effective when the patient is standing, so that the head of the bed should be elevated when they are used. Also, they commonly produce ileus and urinary retention. These side effects may be reduced by the use of cholinergic agents.

The ganglioplegic drugs are of primary value in patients who present with acute congestive failure. These drugs relieve pulmonary edema by decreasing venous tone, diminishing venous pressure and decreasing return of blood to the right heart.

Pentolinium (Ansolysen) may be given intramuscularly in an initial dose of 5 mg.; this dose is increased every one to two hours until blood pressure reduction is adequate or a maximum dose of 50 mg. is given. When given intravenously, 50 to 200 mg. are placed in 1,000 cc. of 5 per cent glucose and water and infusion is continued until blood pressure begins to fall. At this time the rate of the infusion is adjusted to maintain adequate hypotensive effect. In patients with congestive failure, however, fluid intake must be restricted and 5 to 10 mg. of pentolinium may be given in 1 to 10 cc. of fluid. The dose may be increased and repeated every 30 minutes until

TABLE 2

GENERAL OUTLINE OF ANTIHYPERTENSIVE THERAPY FOR THE TOXEMIA PATIENT CONFINED TO THE HOSPITAL

| | Hypotensive Drug Therapy | |
|---|---|---|
| *Severity of Disease* | *Reserpine* | *Hydralazine* |
| Mild pre-eclampsia (blood pressure 140/90 to 160/100 mm. of mercury) | 5 mg., I.M. or I.V.; may be repeated in 1-2 hours if patient still hypertensive. Thereafter, 5 mg. every 4-6 hours as needed to maintain B.P. below 140/90. | Given only when normotensive response not obtained with reserpine alone; 5-10 mg. may be given as injection or 25 mg. in one liter of 10 per cent dextrose in water as slow I.V. infusion. |
| Severe pre-eclampsia | 10 mg., I.M. or I.V.; may be repeated in 1-2 hours if patient still hypertensive. Thereafter, 5 mg. every 4-6 hours as needed to maintain B.P. below 140/90. | 10 to 20 mg. I.V. as single injection for rapid initial blood pressure reduction if desired response not obtained from reserpine; then repeat only when normotensive state not maintained with reserpine alone. May be given by continuous I.V. infusion, 50 mg. in one liter of 10 per cent dextrose in water, when blood pressure is labile or it is difficult to get desired response, as in labor. |
| Severe pre-eclampsia and primary hypertensive disease (B.P. 160/100 mm. Hg) | Same as for severe pre-eclampsia. | Same as for severe pre-eclampsia. |
| Eclampsia | 10 mg. I.V. Repeat in 1-2 hours if patient still hypertensive; then give maintenance dose of 5-10 mg. every 4-6 hours to insure sedation and normotensive state. | If B.P. 170/100 or above, 20 mg. as single I.V. injection. If B.P. between 150/90 and 170/100, 10 mg. as single I.V. injection. If B.P. between 130/80 and 150/90, 25 mg. in one liter of 10 per cent dextrose in water given slowly as continuous I.V. infusion so that it may be discontinued quickly if B.P. falls too low. If, after the initial injection, hypertension is labile or difficult to control, 50 mg. in one liter of 10 per cent dextrose in water should be given as continuous I.V. infusion. |

TABLE 3

APPROXIMATE INDIVIDUAL DOSE OF RESERPINE ADMINISTERED TO CHILDREN PARENTERALLY

| | *Weight* | | *Dose-mg.* | |
|---|---|---|---|---|
| *Average Age (Years)* | POUNDS | KILOGRAMS | AVERAGE | MAXIMUM* |
| 1 | 22 | 10 | 1.0 | 1.5 |
| 3 | 34 | 15 | 1.5 | 2.0 |
| 5 | 44 | 20 | 2.0 | 3.0 |
| 9 | 66 | 30 | 3.0 | 4.5 |
| 12 | 88 | 40 | 4.0 | 6.0 |
| 14 | 110 | 50 | 5.0 | 7.5 |
| Adult | 150 | 70 | 7.0 | 10.0 |

* This is the maximum effective dose.

the desired effect is obtained. Maintenance therapy is then given every six to eight hours as necessary to maintain blood pressure reduction.

Arfonad (trimethylcamphor sulfonate) is more effective than other blocking agents in reducing arterial blood pressure. However, its effect is more transient, and stable control of blood pressure is difficult.

When such drugs are used, it is imperative to have available antihypotensive drugs if the drop in blood pressure is greater than desired. Norepinephrine will arrest the effects of these drugs immediately. It is wise to have a "T" tube connection so that such an infusion may be started promptly (figs. 6 and 7).

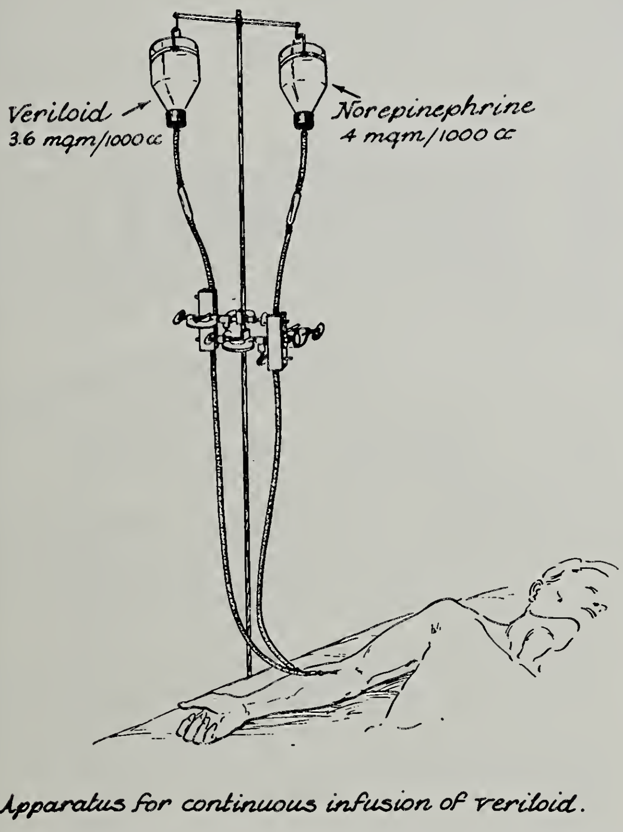

Fig. 6. Apparatus for continuous infusion of veratrum and hexamethonium. A vasopressor agent should be set up so that it is ready for immediate infusion if excessive hypotension should occur.

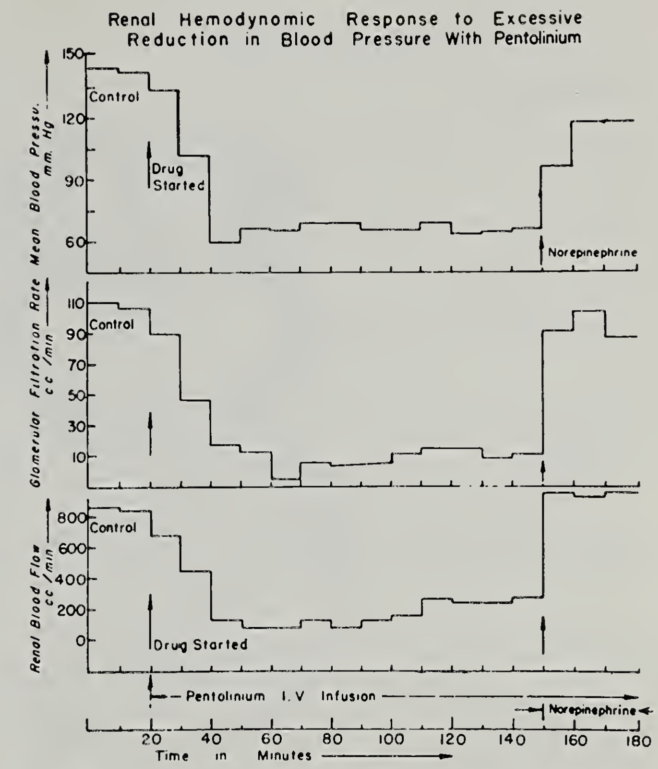

Fig. 7. Response to norepinephrine in a patient who previously became anuric due to excessive blood pressure reduction following the administration of pentolinium. Norepinephrine quickly corrected the depressed glomerular filtration.

## VERATRUM DRUGS

Veratrum extracts are the most potent antihypertensive drugs available, and their effect is manifested in both supine and upright positions. A serious limitation, however, is the narrow range between the therapeutic and the toxic dose. Nausea and vomiting are common. For this reason, and because it is difficult to regulate blood pressure with these drugs, they should be used only when simpler methods are unsuccessful.

Alkavervir (Veriloid) can be given intravenously, using an initial dose of 0.5 mg/kg body weight per minute over a period of 20 minutes. The drug acts within several minutes, but the dose may be repeated if necessary. Blood pressure should be measured every minute until the desired effect is obtained. Thereafter, 4 mg. alkavervir in 1,000 cc. of 5 per cent glucose and water can be infused intravenously as a sustaining solution to produce the desired effect.

The drug should be given orally instead of intravenously as soon as possible. If intramuscular administration replaces intravenous infusion, the first dose should be 0.6 mg. This may be increased by 0.2 mg. every four to six hours until the desired effect is obtained.

## OVERALL THERAPEUTIC APPROACH

The BUN should be followed closely during therapy with repeated tests every two or three days, especially if it is initially elevated. If it rises, the dose of the antihypertensive agent should be gradually diminished until the BUN returns to the pretreatment level. If the renal vascular disease is not severe and is reversible, renal function may improve as the blood pressure is lowered and returns to normal levels. However, azotemia may progress if the renal lesion has become permanent, and lowering of blood pressure in this instance may be fraught with danger.

Following initial control of blood pressure, the drug or drugs should be administered orally.

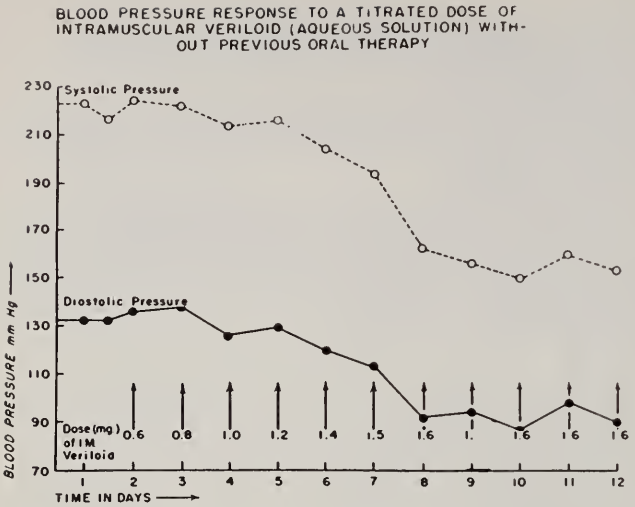

**Fig. 8. Blood pressure response to progressive dose titration of alkavervir (Veriloid).**

Generally a thiazide and a rauwolfia derivative are used, but hydralazine or guanethidine may be added if the blood pressure is still elevated. Reserpine in a dose of 1 mg., Raudixin® 250 mg. or Rauwiloid 4 mg., is usually sufficient. After several months, the dose should be lowered so that the smallest possible effective dose is used. Guanethidine may be added in 10 mg. increments, but it must be remembered that this drug has a marked orthostatic effect and blood pressure should be checked frequently in both supine and standing positions.

### Summary

1. Hypertensive emergencies require rapid reduction of blood pressure. This may frequently be accomplished by the use of reserpine alone, given intravenously, but for greater speed and effectiveness a ganglionic blocking agent may be given for initial control, with reserpine for sustained effect.

2. Hydralazine is especially effective in the treatment of hypertensive emergencies associated with toxemia of pregnancy or glomerulonephritis.

3. The use of ganglionic blocking agents is recommended if reserpine and hydralazine fail to produce the desired effect. These agents are particularly useful in treating hypertensive crises occurring in the presence of congestive heart failure. Side effects such as ileus or urinary retention may be relieved by cholinergic agents. Since they are relatively ineffective in the supine patient, it is usually necessary to elevate the head of the bed when ganglionic blockers are used. Norepinephrine should be kept readily available to counteract excessive hypotensive effect when these drugs are given parenterally.

4. Veratrum alkaloids may be used when other agents are ineffective, but the severity of their side effects limits their use to those cases which fail to respond to other measures.

5. Blood pressure should be lowered gradually if renal function is impaired. The BUN should be checked frequently; if it is not elevated, the blood pressure may safely be lowered to normotensive levels.

6. After the blood pressure has been initially controlled, one of the rauwolfia derivatives and a diuretic of the thiazide type may be given orally for maintenance therapy. If necessary, guanethidine and hydralazine may be added.

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## ACROSS MISSOURI

*(Continued from page 1042)*

Polio Vaccine not be used until its safety has been established beyond doubt. The Public Health Service Polio Advisory Committee has recommended that Type III Oral Vaccine not be administered to persons over 18 years of age. It is apparent, however, that if Type III is given to children, it will, in many cases, infect the parents of such children.

"Since Types I and II alone do not afford complete protection, the Division of Health is recommending that oral vaccine not be used until further evidence is available. In the meantime, the continued use of Salk vaccine should be emphasized."

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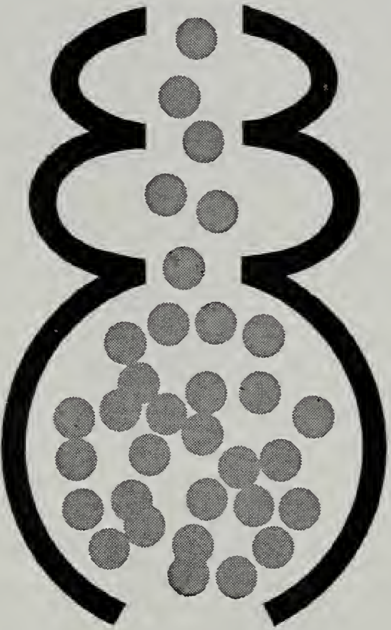
## WOMAN'S AUXILIARY

*(Continued from page 1050)*

Vice-President—all were present to contribute to the excellence of this meeting.

We missed Marjorie Peterson whose family responsibilities took her to the West Coast, but we were delighted to find that Esther Bauman, in Chicago for an another meeting, was able to join us for some of the sessions.

After a meeting like this, one requires time to think, to evaluate, and to plan. Things have been moving at a fast tempo for three days—and suddenly we each go our separate ways to bring back ideas and new concepts. We are imbued with the determination to make our Auxiliary a vital organization dedicated to the service of our fellow man. In this we can find fulfillment.



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ANTIDIARRHEAL
TABLETS and LIQUID

lowers motility / relieves cramping / controls diarrhea

Roentgenographic studies by Demeulenaere[1] established that a single dose of 10 mg. of Lomotil slowed gastrointestinal transit within two hours and that it maintained its decelerating activity for more than six hours.

In diarrhea this lowered propulsion permits a physiologic absorption of excess fluid, lessens frequency and fluidity of stools and gives safe, selective, symptomatic control of most diarrheas. Concurrently, it conserves electrolytes and controls cramping.

Investigators have found the antidiarrheal action of Lomotil not only "excellent"[2] but "efficacious[3] where other drugs have failed. . . ."

**DOSAGE:** For *adults* the recommended initial dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is under control. Maintenance dosage may be as low as two tablets daily. For *children* daily dosages, in divided doses, range from 3 mg. (½ teaspoonful three times daily) for infants 3 to 6 months to 10 mg. (1 teaspoonful five times daily) for children 8 to 12 years. Lomotil is supplied as unscored, uncoated white tablets of 2.5 mg. and as liquid containing 2.5 mg. in each 5 cc. A subtherapeutic amount of atropine sulfate (0.025 mg.) is added to each tablet and each 5 cc. of the liquid to discourage deliberate overdosage. The recommended dosage schedules should not be exceeded.

**NOTE:** Lomotil is an exempt narcotic preparation.

Descriptive literature and directions for use detailed in Physicians' Product Brochure No. 81 available from G. D. Searle & Co., P. O. Box 5110, Chicago 80, Illinois.

1. Demeulenaere, L.: Action du R 1132 sur le transit gastrointestinal, Acta Gastroent. Belg. 21:674-680 (Sept.-Oct.) 1958.
2. Kasich, A. M.: Treatment of Diarrhea in Irritable Colon, Including Preliminary Observations with a New Antidiarrheal Agent, Diphenoxylate Hydrochloride (Lomotil), Amer. J. Gastroent. 35:46-49 (Jan.) 1961.
3. Weingarten, B.: Weiss, J., and Simon, M.: A Clinical Evaluation of a New Antidiarrheal Agent, Amer. J. Gastroent. 35:628-633 (June) 1961.

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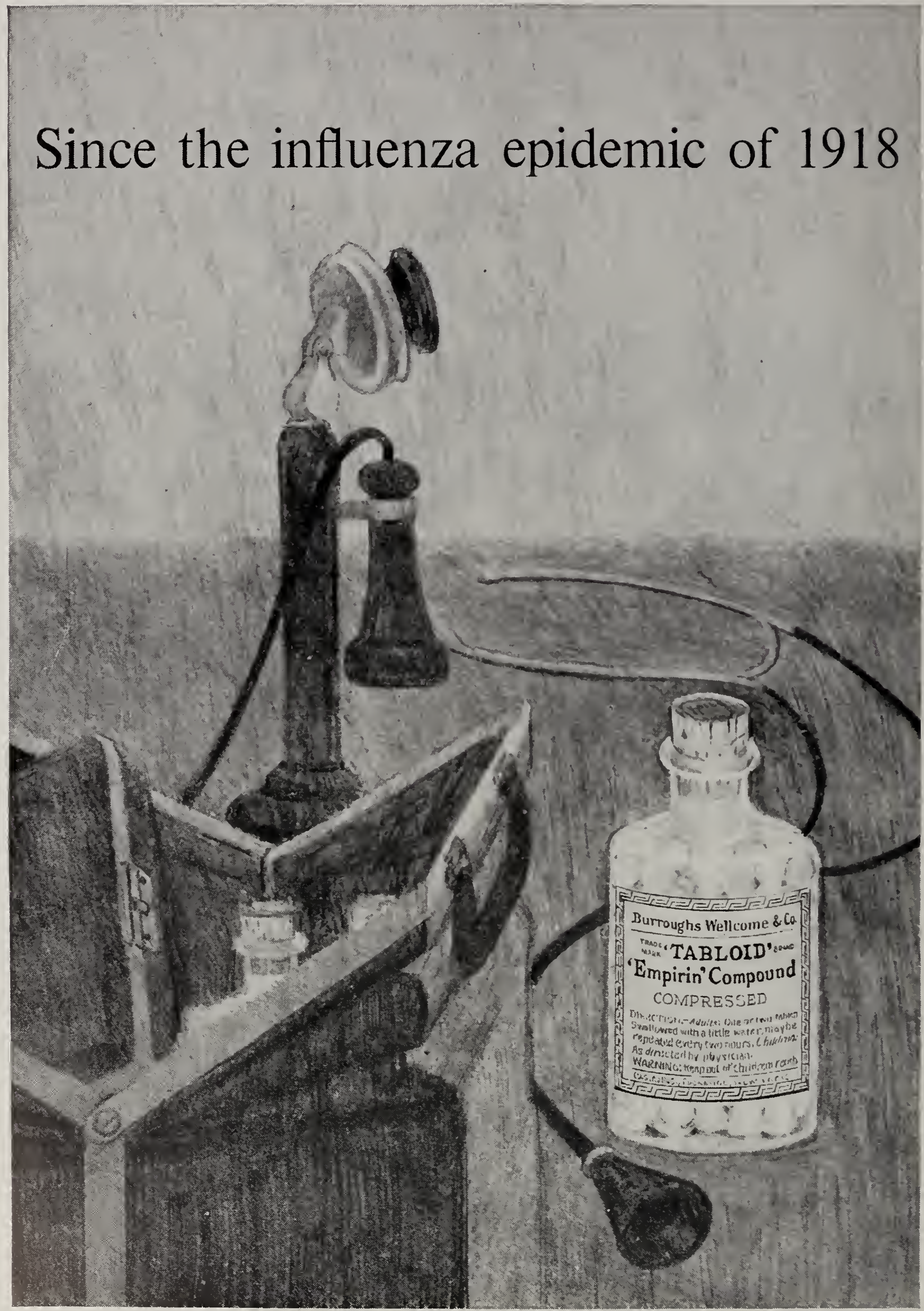
*Research in the Service of Medicine*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TRADE MARK 'TABLOID' BRAND
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COMPRESSED
DIRECTIONS—Adults: One or two tablets swallowed with a little water, may be repeated every two hours. Children: As directed by physician.
WARNING: Keep out of children's reach

....the first choice of many physicians to relieve aches, pains, fever, and general malaise of colds and flu.

Symptomatic and supportive treatment of patients with upper respiratory infections still consists largely of rest, analgesics, fluids and nasal decongestants. During the fateful influenza epidemic of 1918, 'Empirin' Compound was widely used and became well known as a well tolerated and reliable analgesic combination. It was one of the few available analgesic products effective in simultaneously reducing fever and relieving the general malaise which often accompany the flu.

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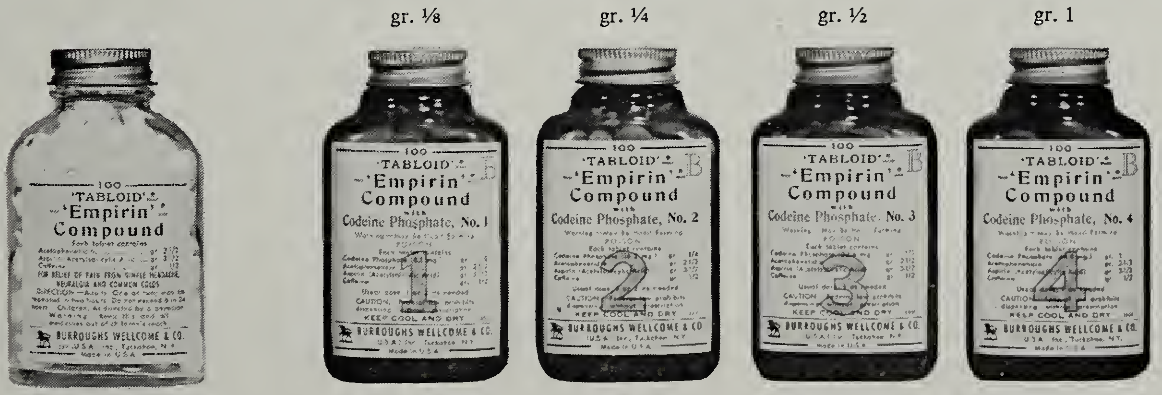
gr. ⅛
gr. ¼
gr. ½
gr. 1
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**SOLOMON GARB, M.D.,** ***Columbia***

# Thermonuclear Survival

## *Shelters in Rock*

This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine*, and are published with permission of that journal.

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Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.

THE MOST EFFICIENT and economical shelters are those which are blasted or mined out of rock. Wherever such shelters can be built, they are probably the best solution to civil defense problems. Such shelters have been widely built in Sweden and in a few places in the United States.

To have a shelter blasted into rock, there must be a appropriate geologic rock formation. Certain kinds of rock are suitable for this purpose and others are not. A complete listing cannot be given here but local engineers and quarrymen can be consulted. In general, information available indicates that the most suitable rock formation is a high grade limestone. In addition, granite and igneous rocks are said to be suitable for this purpose.

In the remaining discussion limestone will be used as an example because the greatest experience has been with this type of rock. The costs are somewhat higher with other rocks and there may be a greater degree of difficulty in working them. The best and cheapest type of formation to work with consists of a high bluff or cliff of limestone which can take a horizontal shaft (fig. 1). A second possibility consists of a large hill of limestone covered with a relatively thin layer of topsoil (fig. 2). However it is also possible to use a formation which is below the surface of a level area covered with a substantial degree of topsoil. To do this it is first necessary to dig a sloping trench down to the rock and start tunneling below ground level. The walls of the trench must be held up with concrete and so the costs generally are much higher (fig. 3). A rough estimate is that the cost of a large shelter blasted into a limestone formation under the soil costs about twice as much as a shelter of similar size blasted into a cliff or a large hill. However, even though the cost is doubled, this type of shelter is still quite economical, being several times cheaper than one made of poured concrete or steel covered with earth.

### SHELTER DIMENSIONS

In shelters blasted out of rock a slightly greater volume of space should be allocated to each occupant because of the irregularity of the walls and floor. This will probably prove to be a more economic way of handling it than evening out the surfaces. A good rule of thumb is that four cubic yards of space (108 cubic feet) be allocated to each individual. By comparison 70 cubic feet are allotted to each individual in other types of shelters. There are no definite standards for the size of the excavation. In commercial quarrying of limestone it is a usual practice to make caverns 30 feet wide by 30 feet long by 30 feet high which are supported by remaining pillars at each corner. This involves a 30 foot span and is most economical in terms of large scale quarrying operations. However, for shelter purposes this type of design leaves a great deal to be desired since the 30 foot height represents a considerable wastage of cubic space unless scaffolding and other relatively expensive procedures are utilized. Accordingly, after consultation with persons who have specialized knowledge in this field, it appears that a more usable shape would be a corridor 10 feet high and 12 feet wide extending virtually the length of the rock formation. With rock formations that are rather wide but not long various modifications are possible with branching corridors coming off the main one. These branching corridors too should be

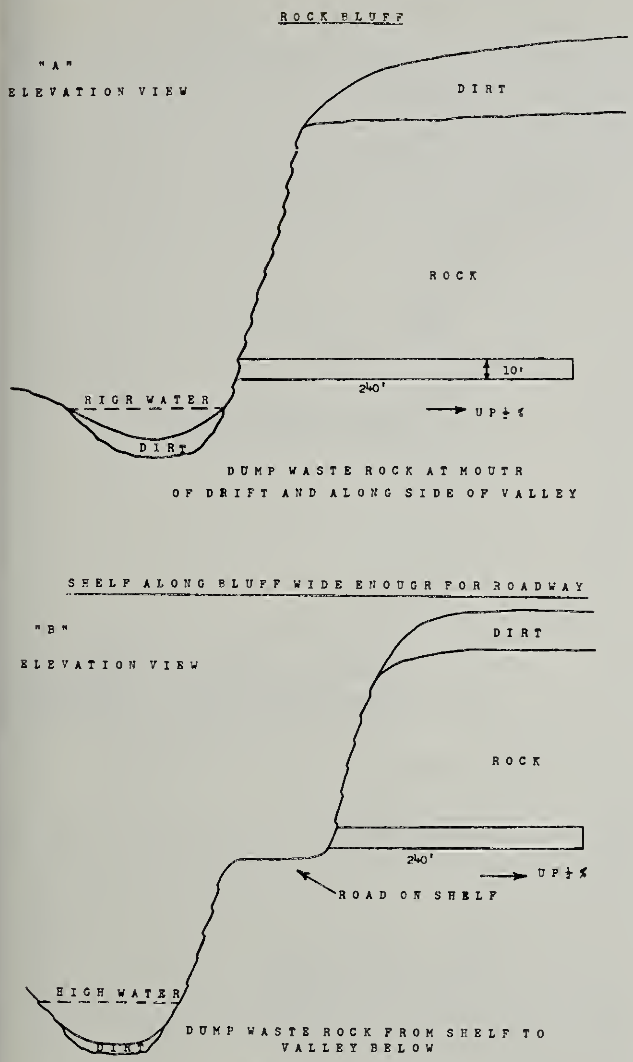

ROCK BLUFF
"A"
ELEVATION VIEW
DIRT
ROCK
10'
240'
UP ½ %
HIGH WATER
DIRT
DUMP WASTE ROCK AT MOUTH OF DRIFT AND ALONG SIDE OF VALLEY
SHELF ALONG BLUFF WIDE ENOUGH FOR ROADWAY
"B"
ELEVATION VIEW
DIRT
ROCK
240'
UP ½ %
ROAD ON SHELF
HIGH WATER
DIRT
DUMP WASTE ROCK FROM SHELF TO VALLEY BELOW

**Fig. 1. A horizontal shaft in a bluff of limestone is the best and cheapest rock shelter.**

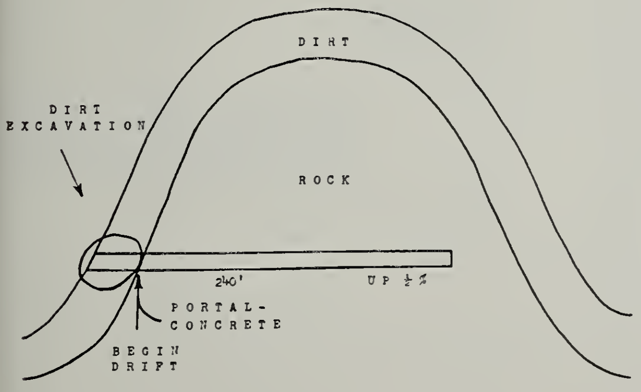

DIRT
DIRT EXCAVATION
ROCK
240'
UP ½ %
PORTAL-CONCRETE
BEGIN DRIFT

**Fig. 2. The cost of this shelter of rock under a hill is slightly higher than those in figure 1 because of concreting the portal.**

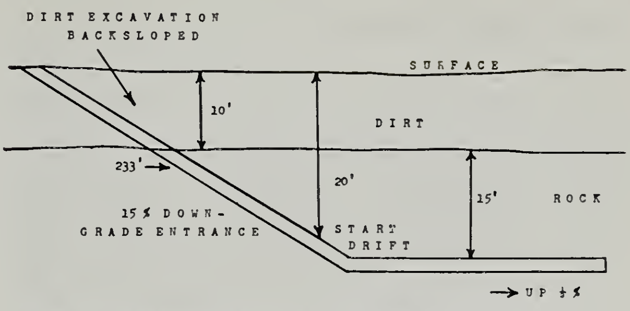
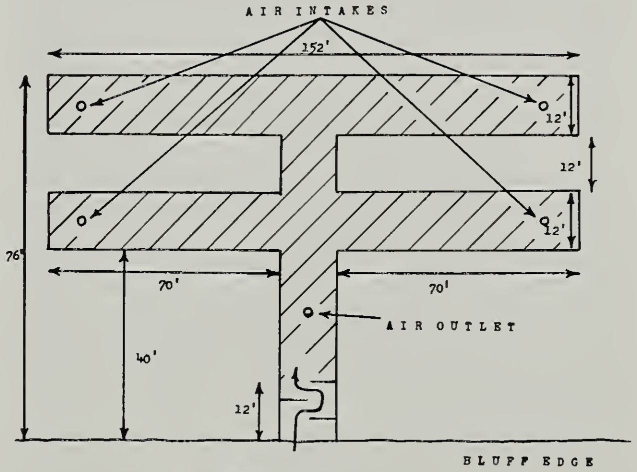
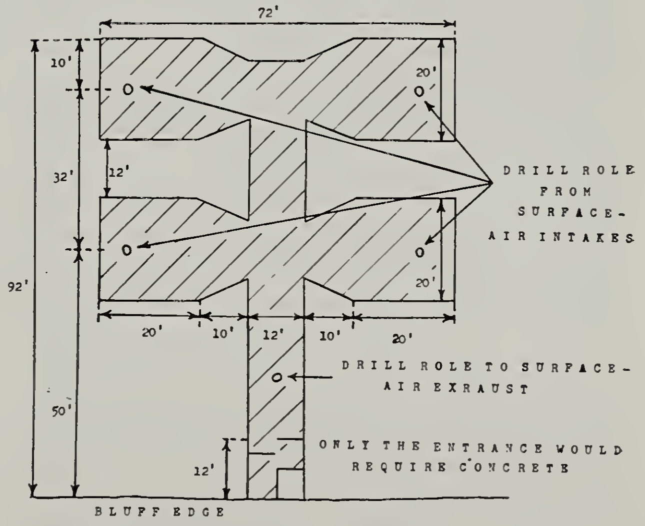

DIRT EXCAVATION BACKSLOPED
SURFACE
10'
DIRT
233'
20'
15'
ROCK
15 % DOWN-GRADE ENTRANCE
START DRIFT
UP ½ %

**Fig. 3. Because the walls must be held up with concrete, the costs of this type of shelter are higher, it being rock under 10 feet of dirt.**


AIR INTAKES
152'
12'
12'
12'
76'
70'
70'
AIR OUTLET
40'
12'
BLUFF EDGE

AREA = 4128 sq. ft.
@ 12 sq. ft. per person = 344 people

**Fig. 4. Dimensions are important.**


72'
10'
20'
32'
12'
DRILL HOLE FROM SURFACE-AIR INTAKES
92'
20'
20'
10'
12'
10'
20'
DRILL HOLE TO SURFACE-AIR EXHAUST
50'
ONLY THE ENTRANCE WOULD REQUIRE CONCRETE
12'
BLUFF EDGE

AREA = 3152 sq. ft.
@ 12 sq. ft. per person = 262 people

Fig. 5. Shelters may have branching corridors.

10 feet high and 12 feet wide so that the usual mechanical loaders and trucks can move in and out (figs. 4 and 5). There may have to be some variations from these dimensions in any particular operation because of differences in the rock structure.

### Cost of Rock Shelters

Rock shelters are only practical for relatively large numbers of people. Probably the minimum size practical rock shelter would be one for 200 persons. The larger the shelter the more economical and practical it is likely to be. Exact costs cannot be given by anyone until a particular rock formation has been carefully surveyed by an engineer with experience and training in evaluating rock formations. It will be necessary for him to judge the ability of particular formations to withstand blasting shocks as well as the overpressures which might result from a nearby explosion of a thermonuclear weapon. Accordingly one can only give the probable minimum and maximum cost. The probable minimum cost for a large shelter blasted out of limestone would be $2.25 per cubic yard or $9 per person sheltered therein. This figure only incicates the cost of blasting and removal of the rock. It does not include any of the extra materials which would be installed in such a shelter. Furthermore, this figure is based on the assumption that experienced Missouri miners do the blasting, employing the highly efficient technics developed in this state.

In other situations the cost of blasting into rock might go as high as $11 per cubic yard or $44 for each person sheltered. It should be noted that even this high figure is considerably less than the cost of an equivalent degree of protection from any other type of shelter.

### Entranceways

If shelters of this sort are to be built it would be wise to add protection against blast which will cost a relatively small amount of additional money. The most vulnerable part of the shelter will be the entranceway and there are several ways of protecting it against blast. One way is the blast proof door. This can be installed and designed to withstand a high blast overpressure. However, it is an expensive way of solving the problem. Other methods do not depend on a structure which can withstand the blast but instead divert the force of the blast or absorb it in some fashion.

The bypass principle is used in the entrance design of Swedish rock shelters. This involves an open tunnel at right angles to the entrance doors. The shock waves then pass through the tunnels and the entrance doors are not exposed to any reflected blast wave but only to the static pressure of the shock wave which is likely to be considerably less (fig. 6). Another method of protecting entranceways is through the use of a maze system with barriers designed to absorb the shock of the blast rather than to resist them. In essence this consists of a series of T-shaped corridors with relatively light barriers placed so as to give way, and absorb the blast wave and relatively heavy barriers designed to protect the occupants (fig. 7).

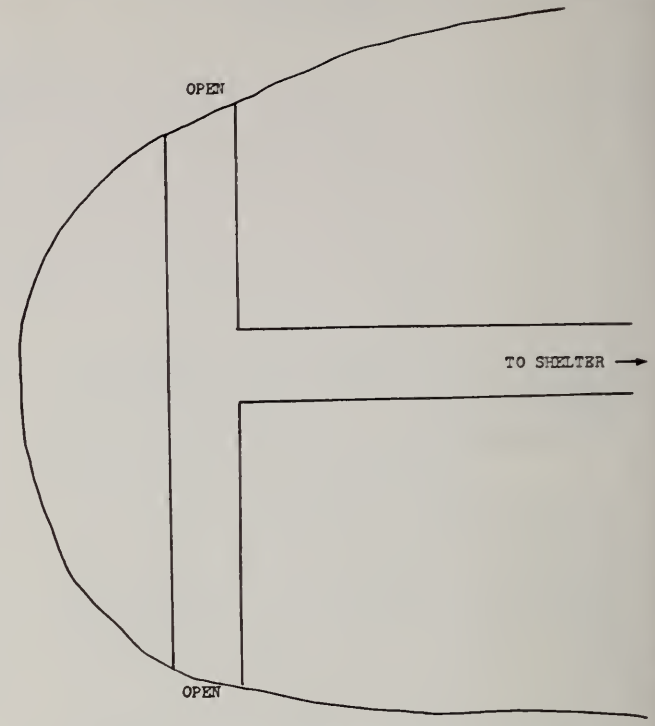


Fig. 6. Long entranceways are desirable.

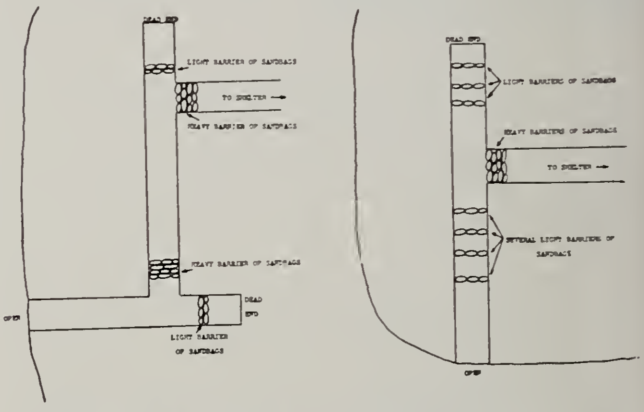

DEAD END
LIGHT BARRIER OF SANDBAGS
TO SHELTER →
HEAVY BARRIER OF SANDBAGS
HEAVY BARRIER OF SANDBAGS
DEAD END
OPEN
LIGHT BARRIER OF SANDBAGS
DEAD END
LIGHT BARRIERS OF SANDBAGS
HEAVY BARRIERS OF SANDBAGS
TO SHELTER →
SEVERAL LIGHT BARRIERS OF SANDBAGS
OPEN

Fig. 7. Maze systems may protect entrances.

Entrances of this sort will have to be blocked after the occupants are inside. Various modifications can be made so as to allow entry into this shelter by persons who are late in arriving. Small passageways consisting of 36 inch diameter, 16 gauge corrugated steel pipe can be placed so as to penetrate the sandbag barriers. If this is done the passageways should be arranged so that no two of them are in a direct line with each other. Another method of allowing entry for late arrivals is through placement of the sandbag barriers so as to form a small offset within the corridor (fig. 8). In addition, any combination of these methods may be used to reduce further the possibility of a blast wave arriving in the interior of the shelter.

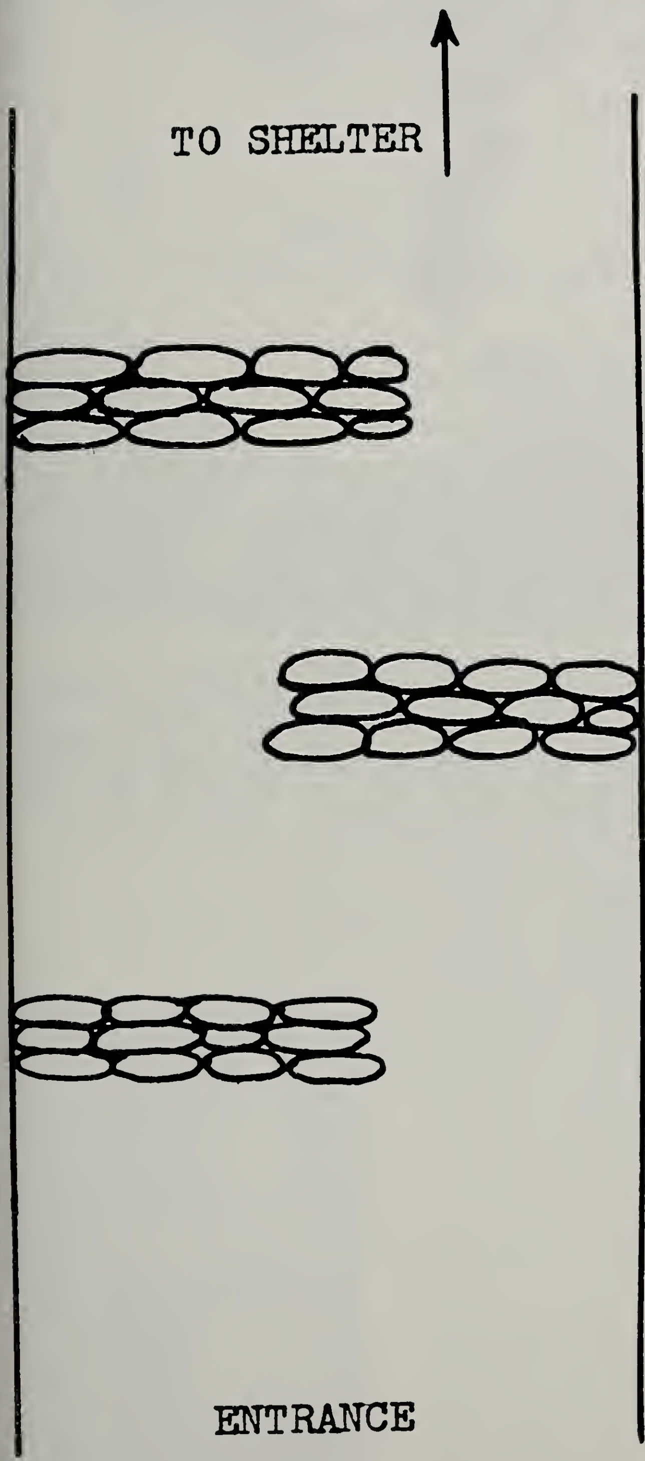


Fig. 8. Offset in sandbags may allow late entry into shelter.

## VENTILATION

At the time that this article is being written the United States government has not as yet developed a reasonably satisfactory design for a ventilation system for community shelters. Accordingly, the suggestions to be made here are to be considered as temporary expedients until the government fulfills its responsibility in this area.

The hand-operated blowers which are suitable for the small family shelter or indeed even for shelters containing up to 30 people are not enough for the large community shelter. Furthermore it appears to be impractical to supply a large number of hand-operated blowers to take care of so many people. The federal government has developed a series of gasoline operated blowers which would in theory handle the ventilation requirements for the large shelters. Unfortunately, there are several drawbacks to those gasoline operated ventilating systems which render their use questionable at this time. First of all, they are inordinately expensive, costing thousands of dollars. Secondly, they depend on a supply of gasoline for their operation and gasoline may not be available or may not be kept in storage in community shelters. Thirdly, gasoline motors have an unfortunate characteristic of becoming gummed in certain vital parts when gasoline is allowed to remain in them for long periods of time when the motors are not in use. In order to be sure that a small gasoline motor will operate properly at the time it is needed, a rigorous program of preventive maintenance is needed. This is practical in the army. At this time it is not practical in civilian areas. Accordingly there is a real risk that if these gasoline powered ventilators are installed in the community shelters, they will not be able to operate when they are needed because of inadequate preventive maintenance.

The most practical type of ventilating system for a community shelter would probably be a foot powered blower attached to the appropriate filters. Some theoretic calculations suggest that a foot-powered blower consisting of a bicycle type frame attached to a rotary squirrel-cage blower could supply approximately 1,000 cubic feet of air per minute. This would suffice for 200 people. Therefore one ventilating set would be enough for approximately 200 people and it would be practical to install as many of these as needed in a large shelter. The blowers that would be used would be the type which are employed to exhaust odors in restaurants and which are used to blow hot air throughout the home in forced air heating systems. They are readily available all through the country. All that is needed is a connection so that the muscular power delivered to the bicycle pedals can be transmitted to the blower in an effective manner.

Adequate filters are also not available at a reasonable price for the large community shelters. However, the manufacturers of the absolute filters which can keep out bacteria as well as fallout particles (see article on "ventilation") can probably produce much larger filters if there is an adequate demand. Another way of handling this problem is through the use of sand filters. These are the basic filters used by Sweden in the large community shelters built in that country. The Swedes have other filters as well so that their shelters give a maximum amount of protection. The Swedish ventilation system includes the following: (1) quick closing valves which will protect the filters from the effect of a blast wave; (2) stone and sand filters which give further protection and which filter out most of the large particles, and (3) special filters designed to absorb the radioactive particles.

The stone filter protects the other filters behind it from the effects of blast. The stone filter consists of a bed of ground stones with a total height of about three feet.

The sand filter is designed to remove the radioactive particles from the air. The sand filter consists of a variety of sand sizes between 1/10 and 3 millimeters in diameter. This sand is piled to a height of about three feet in a concrete case. At the side of the case is an air outlet with a tube which leads to the blower in the shelter. There are several ways in which a sand filter may be improved so as to render it more efficient (fig. 9). Tests will have to be done in order to determine the best proportions of different sizes of sand for this type of filter. An important consideration is that the resistance offered to the blowers not be excessive.

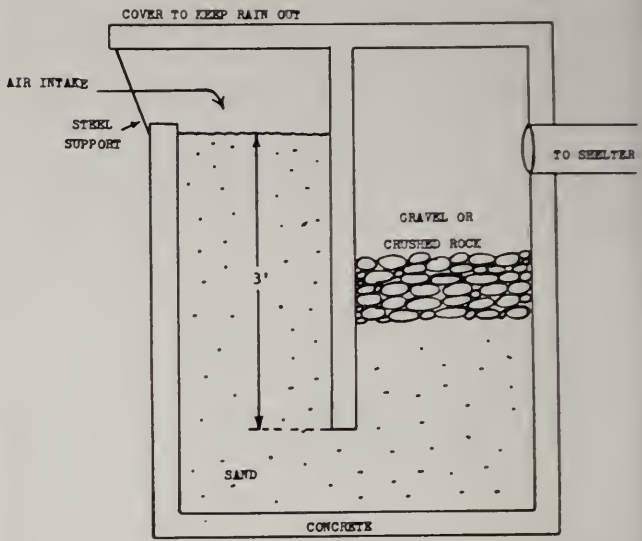


Fig. 9. Various methods of ventilation may be used.

## Overhead Protection

There have not been any specifications issued by the United States Government up to this time as to the thickness of rock which should be left overhead to afford protection against blast. Accordingly it seems advisable to follow as closely as possible the Swedish example since they have had so much more experience with building these shelters and appear to be so far ahead of us in this. For shelters which are blasted into rock hills, cliffs or bluffs, it appears that the minimum thickness of rock overhead should be 45 feet. This assumes a sound rock structure. If the structure of the rock involves faults or flaws a greater thickness overhead may be needed. Shelters that are blasted into rocks below the regular surface of the ground probably would have to be built with a lesser rock thickness over head. How much less, however, cannot be stated unless careful engineering studies are made of the particular rock formation.

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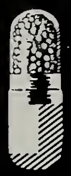

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# President's Message

This month the Missouri State Medical Foundation is making a special appeal for contributions to our medical student loan fund.

I hope that you will think long and hard about the real worth of the Foundation to the public and the profession and, accordingly, give generously.

The loss of a fine potential physician simply because of financial problems during the expensive medical school years is tragic. The low cost loans provided by the Foundation to young Missouri men and women help to prevent such losses, and through their support of the program the doctors of MSMA are demonstrating their concern that ample medical service be assured for the public in the future.

It would be unfortunate indeed if the Foundation's own financial situation precluded its assistance to a medical student in need. We are dangerously close to such a point at present, however, particularly in the face of the requests for loans that are sure to come before the next school semester.

Your gift to the Foundation is sorely needed and soon. Why not write your check today?

D. M. Dowell, M.D.

# EDITORIALS

## BLUE SHIELD PLANS PASS 50 MILLION MARK

The 50 million member mark was surpassed by the 76 Blue Shield Plans located in North America in their enrollment as of June 30, 1962, the National Association of Blue Shield Plans announced recently. Total membership in Blue Shield at the end of June reached 50,047,782, as a result of a net gain of 795,160 new members during the second quarter of 1962. The June 1962 figure represents an increase of almost two million members over the June 1961 enrollment mark.

Included in the national Blue Shield enrollment figures for the first time during the period were the subscribers of Hospital Care Association, Durham, N. C., and Walla Walla (Wash.) Valley Medical Service Corporation. These two organizations were approved as active members of the National Association of Blue Shield Plans in April of this year.

The national association reported that Blue Shield now covers one out of every four Americans, and 15 per cent of the total Canadian population.

Thirteen Blue Shield Plans have enrolled more than 40 per cent of the population in the areas they serve. Among them, the District of Columbia Blue Shield Plan has enrolled four out of every five residents in that area; Rhode Island Blue Shield has more than 68 per cent of that state's population covered; Rochester, N. Y., has nearly 66 per cent of its area's population enrolled, and the Delaware Plan has almost 60 per cent of the state enrolled.

Three Blue Shield Plans registered significant enrollment gains during the second quarter. The Toronto Blue Shield Plan added nearly 90,000 new members during the period; Massachusetts Blue Shield reported a gain of more than 77,000 members and the New York City Plan registered a 51,000 gain.

The national association also noted that there were 19,798,391 contracts in force as of June 30, with the number of members per subscriber contract averaging 2.53 members.

## INFANT DEATHS AT RECORD LOW

New record lows for the infant mortality rate were established in 1960 and again in 1961—25.7 and 25.3 deaths per 1,000 live births respectively.

As many as one in 10 American babies born in 1915 died before their first birthday. But the proportion is now down to about one in 40, a reduction of nearly 75 per cent. The Health Information Foundation in the September-October issue of *Progress in Health Services,* its statistical bulletin, traces the diminishing hazards of infancy from the time of World War I to the present.

The greatest advances during this time have been made against the infective and parasitic diseases, respiratory conditions, and digestive diseases, the Foundation reported.

The bulletin noted "a particularly sharp drop to 33.8 deaths per 1,000 live births during the first year following World War II, probably a result of the newly widespread use of penicillin by civilians and the extensive application of DDT." After 1946 the general downward trend continued until 1957. Then the Asian influenza epidemic of 1957-1958 raised the mortality rate, but the downward trend continued after 1958.

The sexes have not benefited equally from the decline, the bulletin said. Some 29 per cent more male infants died than female infants.

# Ramblings of the Field Secretary

Another successful "Athletic Injuries" program was sponsored by the West Central Missouri Medical Society on Thursday night, September 13, for the high school athletic coaches and physicians of the West Central Missouri area. This has become an annual affair, particularly at the request of the coaches. The medical society makes every effort to present a program on the management of athletic injuries which will be of maximum benefit to both the coaches and the physicians of the area. The meetings are held at the Country Club in Nevada beginning with a social hour, giving opportunity for coaches and doctors to get acquainted. A bountiful dinner is served and then the formal program follows. The coaches are guests of the medical society on these occasions. A number of physicians and coaches from Barton-Dade and Jasper counties were also present in addition to those from the five counties composing the West Central Missouri Medical Society.

Coach Harry Smith makes a point.

The formal program was presented by the University of Missouri Athletic Department and Medical School in cooperation with the Missouri Academy of General Practice. Dr. Roy Pearse of Nevada, President of the Missouri Academy of General Practice, served as chairman for the meeting.

The program presented an interesting and informative discussion of ankle and muscle injuries with demonstrations of wrapping and taping by Glenn McElroy, M.D., orthopedic surgeon, Columbia, and Mr. Fred Wappel, Trainer, University of Missouri Athletic Department. Dr. McElroy and Mr. Wappel also touched on knee injuries which seems to be one of the major problems in the category of athletic injuries. Mr. Harry Smith, MU Freshman Football Coach, spoke to the group on "Missouri's Secret Power Offense—Our Medical Doctors." Harry adds considerable spice to any program of this type with his outstanding football background. Dean Vernon Wilson of the University of Missouri Medical School was a welcome guest at the meeting and served in the valuable capacity of arranging to "fly" the participants in the program to and from the meeting.

### Missouri Health Council

More than 100 people attended the 15th annual meeting of the Missouri Health Council held at the Missouri Hotel in Jefferson City on Wednesday, September 26. This year's program was centered around two important topics: one, "The Inter-Relationship in Research Between Voluntary Health Agencies and Official Governmental Health Agencies," and two, "The Inter-Relationship in Health Education in Missouri Between Such Agencies." In discussing the inter-relationship in research, Dr. H. M. Hardwicke, Acting Director of the Missouri Division of Health, explained a number of what he determined "operational research programs" in Missouri in which various voluntary groups and agencies were cooperating with the Missouri Division of Health in studying certain local health problems where experimental approaches to the solutions of these problems are being used. Other speakers on the research angle were representatives of the American Cancer Society, the American Heart Association and the U. S. Public Health Service. Additional representatives spoke on the inter-relationship in health education, particularly in Missouri between voluntary and official agencies.

Terry E. Lilly, M.D., Kansas City, chairman of the education committee, Missouri Division, American Cancer Society; William J. Shaw, M.D., Fayette, president, Missouri Heart Association; and Mr. James DeKroeger, Health Administrator, Chronic Diseases, Missouri Division of Health, gave informative discussions on how this inter-relationship was working out in Missouri so far as their organizations were concerned. Following the formal presentations on these two phases of the day's program, audience

*(Continued on page 1110)*

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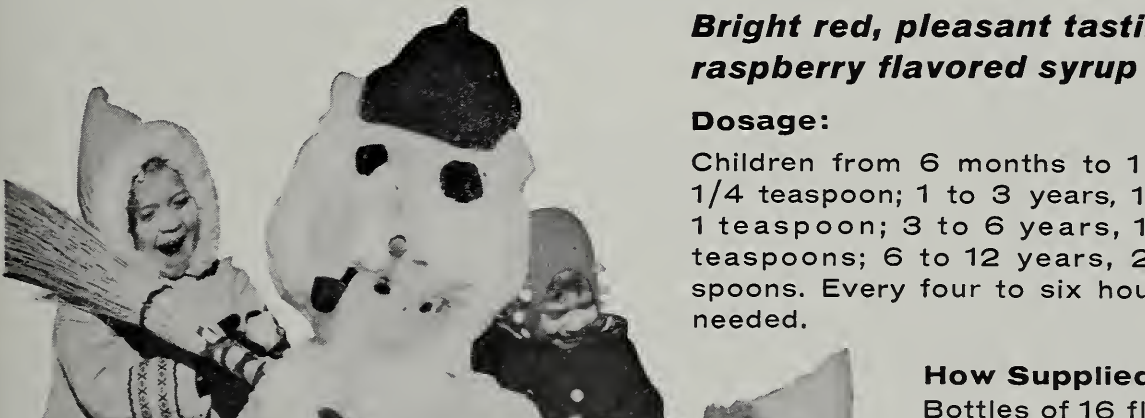

# Missouri Medical News

The star of brigadier general was pinned on **Oscar P. Hampton Jr.**, M.D., St. Louis, in ceremonies in the office of Major General Curtis J. Herrick, commanding general of the Eleventh United States Army Corps, in St. Louis, early in August. Brig. Gen. Hampton is a mobilization designee in the Office of the Surgeon General, Washington, D. C., and is attached to the 5137th U. S. Army Reserve Corps in St. Louis.

The Vernon County Tuberculosis Association recently elected **L. P. McCann**, M.D., Nevada, as president.

At the 10th anniversary dinner of the staff of St. John's Hospital, Springfield, during September, **O. B. Crawford**, M.D., was elected president of the staff. Other officers elected were **Glenn O. Turner**, M.D., president-elect; **Daniel Holmes**, M.D., secretary, and **Robert Stewart**, M.D., reelected treasurer.

Recently named to the board of directors of the Chamber of Commerce of St. Joseph was **S. E. Senor**, M.D., St. Joseph.

The Deaconess Hospital, St. Louis, staff has elected **William L. Macon Jr.**, as president. **James Y. Griggs**, M.D., was elected president-elect; **William G. Arney**, M.D., vice president, and **Frederick W. Martin**, M.D., secretary-treasurer. Department representatives chosen are **Herbert C. Wiegand**, M.D., medicine; **Vincent T. Houston**, M.D., surgery, and **Frank G. Robertson**, M.D., obstetrics and gynecology.

"Hypnosis" was the subject of a talk presented by **Nicholas Jaime**, M.D., Kansas City, at the fall meeting of the Western Missouri chapter of the American Physical Therapy Association on September 11.

Financing medical care for those over 65 was discussed by **John A. Griffith Jr.**, M.D., Kansas City, before residents and interns of Kansas University Medical Center following the showing of a film featuring Edward R. Annis, M.D., on September 4.

Alumni contributions to St. Louis University School of Medicine in 1961 were the highest among the nation's 86 medical schools, according to the A.M.A. Graduates gave $199,499 last year for medical education. Contributions were received from 54 per cent of the medical alumni.

At the annual business meeting of the College of American Pathologists held in Chicago September 5, **Victor B. Buhler**, M.D., Kansas City, was named president-elect.

## PAINTINGS AUCTIONED TO HELP SALK INSTITUTE

Following appointment of S. W. Scorse, M.D., Joplin, as a member of the Missouri Founders Board of the Salk Institute for Biological Studies in San Diego, Calif., he enlisted the help of other members of the American Physicians Artists' Association, a part of the American Medical Association.

Four of the twelve members in Missouri of the association exhibited paintings and placed some at auction at the Truman Library in Independence as a means of raising money for the institute. Selected paintings from the exhibit at the Truman Library are to be sold at showings in 25 cities.

**Dr. Scorse (left) and Mr. Truman (second from right) view one of the paintings exhibited.**

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# New Members

**Charles C. Abel,** M.D., 4511 Forest Park Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Abel is a native of Missouri, received his preliminary education at Westminster College, and his M.D. degree at Washington University in 1956.

**John Balhuizen,** M.D., 2730 S. Mall Ave., Kansas City, has become a member of Clay County Medical Society. Dr. Balhuizen is a native of the Netherlands, received his preliminary education at the University of Amsterdam, and his M.D. degree at the University of Amsterdam in 1953.

**Arthur E. Baue,** M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Baue is a native of Missouri, received his preliminary education at Westminster College, and his M.D. degree at Harvard University in 1954.

**Hal G. Bingham,** M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Bingham is a native of Kansas, received his preliminary education at the University of Wichita, and his M.D. degree at the University of Kansas in 1954.

**Stephen F. Bowen Jr.,** M.D., 16 Hampton Village, St. Louis, has become a member of St. Louis Medical Society. Dr. Bowen is a native of Massachusetts, received his preliminary education at Holy Cross College, and his M.D. degree at Tufts University in 1956.

**Elliot M. Braverman,** M.D., 1806 West 11th St., Sedalia, has become a member of Pettis County Medical Society. Dr. Braverman is a native of Boston, received his preliminary education at Tufts College, and his M.D. degree at Tufts Medical School in 1955.

**E. K. Burk,** M.D., 5140 Antioch Rd., Kansas City, has become a member of Clay County Medical Society. Dr. Burk is a native of Missouri, received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1958.

**Paul A. Byrne,** M.D., 4211 Bayless Ave., St. Louis has become a member of St. Louis Medical Society. Dr. Byrne is a native of Ohio, received his preliminary education at Xavier College, and his M.D. degree at St. Louis University in 1957.

**John M. Cary,** M.D., 3720 Washington Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Cary is a native of Missouri, received his preliminary education at Central College, and his M.D. degree at St. Louis University in 1958.

**Wilma W. Claseman,** M.D., 1320 Market St., St. Louis, has become a member of St. Louis Medical Society. Dr. Claseman is a native of Illinois, received her preliminary education at St. Louis University, and her M.D. degree at St. Louis University in 1958.

**Marvin J. Friedenberg,** M.D., 1418 Faris Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Friedenberg is a native of Connecticut, received his preliminary education at Yale University, and his M.D. degree at Tufts University in 1955.

**Joseph Gagliardo,** M.D., 4209 Santen Drive, St. Louis, has become a member of St. Louis Medical Society. Dr. Gagliardo is a native of Italy, received his preliminary education at Liceum-Giuseppe Garibaldi, and his M.D. degree at the University of Palermo, Palermo, Italy, in 1953.

**Harley Galbol,** M.D., Box 950, Excelsior Springs, has become a member of Clay County Medical Society. Dr. Galbol is a native of Denmark, received his preliminary education at Efterslagtsselskabets Gym, Akademisk Kursus, and his M.D. degree at the University of Copenhagen in 1948.

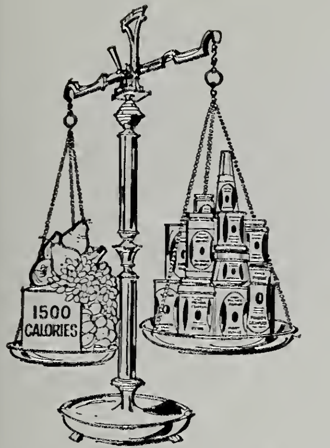
**Paul R. Hackett,** M.D., 6348 Washington Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Hackett is a native of Burma, received his preliminary education at Denison University, and his M.D. degree at Western Reserve University in 1949.

**Thomas T. Harkness,** M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Harkness is a native of Mozambique, received his preliminary education at the University of California, and his M.D. degree at Yale University in 1955.

**Leo J. Knaff,** M.D., 100 N. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Knaff is a native of Illinois, received his preliminary education at Loyola University, and his M.D. degree at Loyola University in 1955.

**Marvin I. Koenig,** M.D., Northland Medical Bldg., St. Louis, has become a member of St. Louis Medical Society. Dr. Koenig is a native of New Jersey, received his preliminary education at Purdue University, and his M.D. degree at St. Louis University in 1958.

**James W. Mackenzie,** M.D., 807 Stadium Rd.,



# How to get patients to follow your directions for weight control...easily

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**Low carbohydrate, low fat:** Meat products have most of the hard fats removed (these are the saturated type) in a way that cannot be done at home. Sauces and dressings are prepared with a high proportion of non-fat milk solids, vegetable colloids; all are delicious and appetizing. Fruits, juices, desserts and sauces are prepared with non-caloric sweetener—natural fruit values are intact.

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**Easy medical tool for doctors:** No possible dangerous side effects, not even temporary dislocation of meal patterns. Figure Control Foods in supermarkets include: Soups, Meats, Poultry, Sauces, Salad Dressings, Preserves, Syrup, Fruits, Drinks, Desserts, Sweeteners.

## New Mott's Figure Control® Foods offer Good Eating at Half the Usual Calories

| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Apple-Grape Drink | ½ cup | 20 | 52 |
| Five-Fruit Juice Breakfast Drink | ½ cup | 20 | 52 |
| Braised Beef and Vegetables | 6½ oz. | 184 | 380 |
| Meat Balls in Brown Gravy | 3½ oz. | 84 | 280 |
| Chopped Chicken Livers | 1 oz. | 31 | 100 |
| Chicken a la King | 3 oz. | 72 | 230 |
| French Style Dressing | 1 tbsp. | 10½ | 60 |
| Brown Gravy | 1 tbsp. | 7 | 21 |

| | Quantity | Figure Control Calories | "Regular" Food Calories |
|---|---|---|---|
| Applesauce | ½ cup | 48 | 90 |
| Fruit Cocktail | ½ cup | 44 | 90 |
| Cherry Pie Filling | 1 oz. | 20 | 60 |
| Chocolate Topping | 1 tbsp. | 8 | 63 |
| Preserves (Peach, Strawberry) | 1 tbsp. | 9 | 55 |
| "Maplette" Syrup | 1 tbsp. | 9 | 55 |
| Liquid or Powder Sweetener | (to equal 1 tbsp. of sugar) | 0 | 16 |

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Columbia, has become a member of Boone County Medical Society. Dr. Mackenzie is a native of Ohio, received his preliminary education at the University of Michigan, and his M.D. degree at the University of Michigan in 1951.

**Joseph C. Rush**, M.D., 6500 Chippewa St., St. Louis, has become a member of St. Louis Medical Society. Dr. Rush is a native of Iowa, received his preliminary education at Iowa State University, and his M.D. degree at Creighton University in 1952.

**George L. Tucker**, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Tucker is a native of New York, received his preliminary education at Columbia College, and his M.D. degree at Harvard Medical School in 1956.

**Henry W. Walters**, M.D., 35 N. Central Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Walters is a native of Nebraska, received his preliminary education at the University of Nebraska, and his M.D. degree at the University of Nebraska in 1931.

**Robert L. Wheeler**, M.D., 302 E. Wall St., Harrisonville, has become a member of West Central Medical Society. Dr. Wheeler is a native of Michigan, received his preliminary education at Kansas Teachers College, and his M.D. degree at Missouri University in 1961.

**Lester E. Wolcott**, M.D., 109 Russell Blvd., Columbia, has become a member of Boone County Medical Society. Dr. Wolcott is a native of New York, received his preliminary education at the University of Iowa, and his M.D. degree at the University of Buffalo in 1951.

## DEATHS

**Seabaugh, D. Rusby**, M.D., Cape Girardeau, a graduate of Washington University, 1933; member of Cape Girardeau County Medical Society; aged 54; died August 30, 1962.

**Williams, Delon A.**, M.D., Kansas City, a graduate of Rush Medical College, 1918; member of Jackson County Medical Society; aged 71; died September 4, 1962.

**Stocking, Lyman C.**, M.D., Kirkwood, a graduate of Medico Chirurgical College, 1899; member of St. Louis County Medical Society; aged 90; died September 6, 1962.

**Fraser, Sydney A.**, M.D., St. Louis, a graduate of Meharry Medical College, 1952; member of St. Louis Medical Society; aged 35; died September 7, 1962.

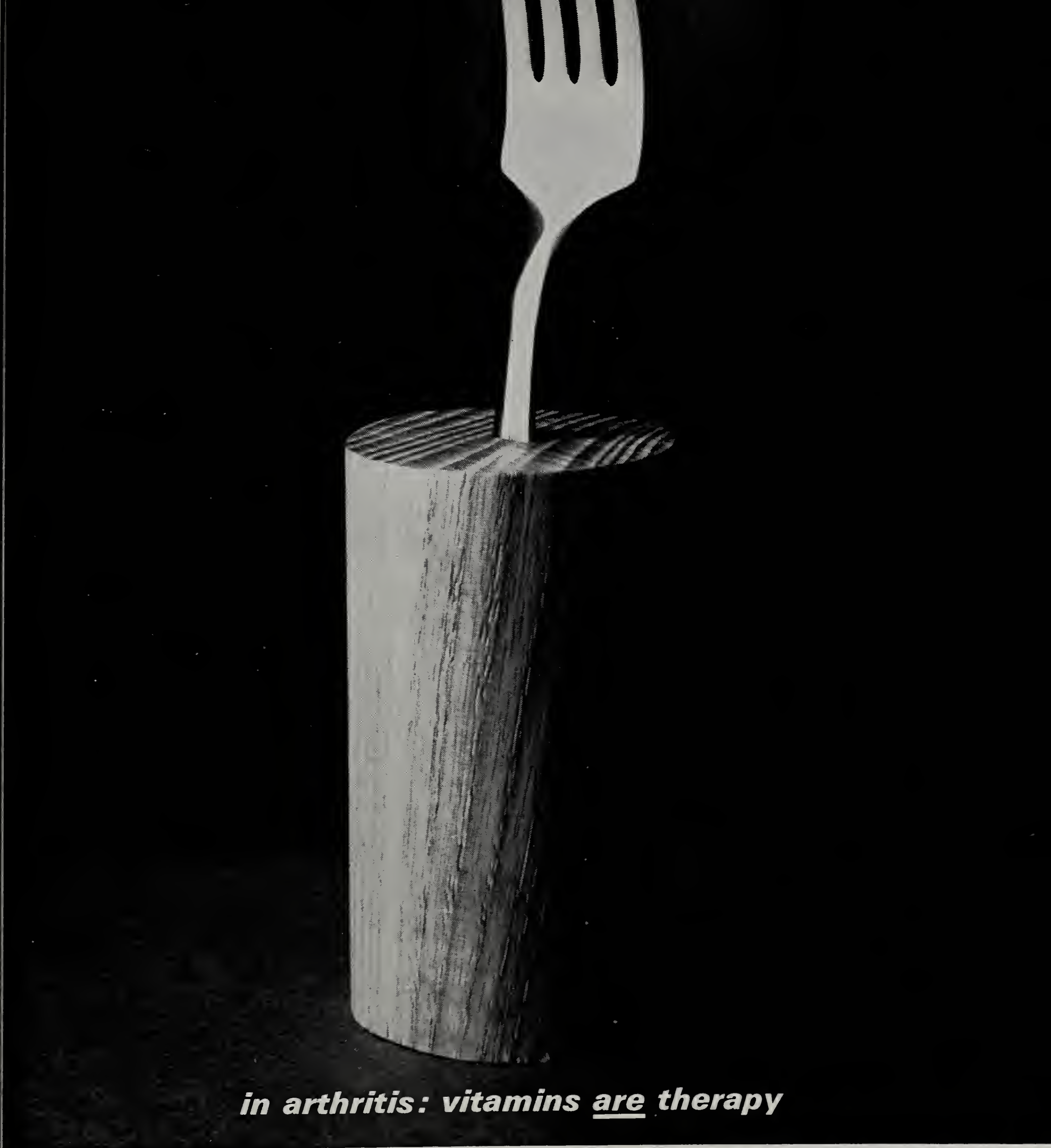
## MISSOURI ACADEMY OF GENERAL PRACTICE

*(Continued from page 1044)*

11:00 a.m. Mammography, Don C. Weir, M.D., St. Louis, Professor and Director of Radiology, St. Louis University School of Medicine.
11:20 a.m. Plastic Surgery You Should Tell Your Patient About, Charles E. Horton, M.D., Norfolk.
11:40 a.m. Panel Discussion.
12:30 p.m. Lunch and Exhibits.

### SYMPOSIUM ON PERIPHERAL VASCULAR DISEASE

1:30 p.m. Care of the Limb With an Impaired Circulation, Thomas F. Nealon Jr., M.D., Philadelphia, Associate Professor of Surgery, the Jefferson Medical College of Philadelphia, and Visiting Lecturer in Surgery, Graduate School, University of Pennsylvania.
1:50 p.m. What We Know About the Natural History of Arteriosclerosis in the Extremities, E. A. Hines Jr., M.D., Oteen, N. C., Consultant in Internal Medicine, Veterans Administration Hospital at Oteen and Emeritus Consultant, Mayo Clinic.
2:10 p.m. The Role of Sympathectomy in Peripheral Vascular Disease, K. B. Coldwater, M.D., St. Louis, Formerly Chief of Surgical Service, Veterans Administration Hospital in St. Louis.
2:30 p.m. Intermission to View Exhibits.
3:00 p.m. The Choice of the Patient and the Specific Operation in Surgery for Arterial Disease of the Lower Extremities, Thomas F. Nealon Jr., Philadelphia.
3:20 p.m. Endarterectomy in the Treatment of Peripheral Vascular Occlusions, Carl A. Moyer, M.D., St. Louis, Bixby Professor of Surgery and Head of the Department, Washington University School of Medicine.
3:40 p.m. The Treatment of Arteriospastic Disease, E. A. Hines Jr., M.D., Oteen, N. C.
4:00 p.m. Panel Discussion on Peripheral Vascular Disease.
4:30 p.m. Adjournment.



In dealing with the chronic stress of arthritis the physician often faces the problem of nutritional imbalance. High potency B and C supplementation is needed for rapid replenishment of tissue stores of these water-soluble vitamins. STRESSCAPS meet this need and help support the natural metabolic defenses in the disease. Supplied in decorative "reminder" jars of 30 and 100.

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| Vitamin $B_2$ (Riboflavin) | 10 mg. |
| Niacinamide | 100 mg. |
| Vitamin C (Ascorbic Acid) | 300 mg. |
| Vitamin $B_6$ (Pyridoxine HCl) | 2 mg. |
| Vitamin $B_{12}$ Crystalline | 4 mcgm. |
| Calcium Pantothenate | 20 mg. |

Recommended intake: Adults, 1 capsule daily, or as directed by physician, for the treatment of vitamin deficiencies.

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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Buchanan County Medical Society

The first fall meeting of the Buchanan County Medical Society was held on Wednesday, September 5, following a dinner at 6:30 p.m., in the Empire Room of Hotel Robidoux, St. Joseph. The speaker was Reverend George Mundinger, Protestant Chaplain of the University of Kansas Medical Center, who talked on, "Patient, Physician and Chaplain."

Reverend Mundinger noted that both the doctors and clergy were vital to the welfare of the patient and the traditional "fence" between physicians and clergymen over the patient's bed is coming down. The speaker cited the growing awareness of the relationship of medicine and the ministry, a trend he predicted will bring greater cooperation between the two professions for the welfare of those both seek to help.

The speaker was presented by Dr. Charles Willman, program chairman. Dr. William B. Rost, vice president, presided at the meeting. Forty-five physicians attended the session.

Herbert C. Senne, M.D., *Secretary*

### Grand River Medical Society

Forty-three members, wives and guests emerged from the summer recess to reconvene at the Strand Hotel in Chillicothe for the September dinner meeting of the Grand River Medical Society, Thursday evening, September 13.

The doctors were honored to have as guest speaker H. M. Hardwicke, M.D., Acting Director of the Missouri Division of Health. Dr. Hardwicke pointed out the ironic position that medicine finds itself in today where at a time when doctors are able to treat many illnesses, formerly untreatable, the art of medicine is held in ever diminishing esteem. He emphasized that the plight of medicine is part of a national plight and traced the cause from the advent of socialistic trends in the early thirties to the present stage of saturation. Correlated with the individual's surrender of responsibility, for his own security has been a decrease in resoluteness and an increase in mental disturbances. Dr. Hardwicke offered practical solutions to the problem. His thoughtful discussion was appreciated by an attentive audience.

Mrs. Harold Wood of Chillicothe spoke to the Auxiliary on "Helping the Exceptional Child."

At the business meeting it was announced that the annual elections would be held in October. Future scientific programs were discussed. An announcement was made of the annual meeting of the Missouri Health Council September 26 in Jefferson City. The doctors adjourned early to wait patiently for their wives to conclude their extended program.

Guests present were: Dr. H. M. Hardwicke and W. C. Allen of Jefferson City; Mrs. Harold Wood of Chillicothe; Mr. Ben Blackshire of Marion Laboratories and Mr. Wayne Young of Ross Laboratories.

Frank R. Daley, M.D., *Secretary*

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## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### Chariton-Macon-Monroe-Randolph County Medical Society

A meeting of the Chariton-Macon-Monroe-Randolph County Medical Society was held in the library of the Woodland Hospital in Moberly, on Thursday night, September 13. The scientific speaker for the evening was Michael Karl, M.D., Department of Internal Medicine, Washington University Medical School, St. Louis. He spoke on "Complications From New Drugs."

Dr. Karl stressed the point that although new drugs are doing a fine job in helping to cure disease, it must still be considered that these drugs occasionally may have undesirable effects.

The Society voted approval to an oral polio vaccination program and will assist in organizing such programs.

Dr. F. A. Barnett discussed AMPAC and urged members of the society to join.

It was announced that Dr. C. C. Cohrs had again been chosen as medical advisor for the central Missouri Medical Assistants Society and will thereby serve as liaison between that society and the medical Society.

Those members attending were: Drs. Donald Eggleston, Howard Miller, Carl Rinker, James Campbell and Gretchen Collins, Macon County; Avery P. Rowlette, J. Will Fleming Jr., Thomas

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S. Fleming, C. C. Cohrs, Robert H. Young, S. R. Szymanski, Robert Hasson, L. E. Huber, C. C. Smith and P. V. Dreyer, Randolph County; and Dr. F. L. Harms, Chariton County. Guests present were: Dr. Leopold LaChance, Centralia, and Drs. Robert Mollenhoff and Roland Lohmar, residents in medicine at the University of Missouri Medical Center.

J. Will Fleming Jr., M.D., *Secretary*

### Marion-Ralls-Shelby County Medical Society

A dinner meeting of the Marion-Ralls-Shelby County Medical Society was held at the Moose Lodge in Hannibal on Tuesday night, September 18. A social hour preceded dinner and the program. We were fortunate in having as our guest speaker, W. C. Allen, M.D., of the Missouri Division of Health, Jefferson City. Dr. Allen spoke on the subject, "Chronic Diseases." He pointed up many problems with which we are all concerned and discussed various types of programs that the Division of Health sponsors in this field.

A good general discussion of this entire subject was stimulated from his formal remarks.

Wyeth Hamlin, M.D., *Secretary*

## FOURTH DISTRICT

### PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Lincoln-St. Charles County Medical Society

A dinner meeting of the Lincoln-St. Charles County Medical Society was held at the Southern Air in Wentzville on Tuesday night, September 25. Activities began with a social hour at 7:00 p.m. followed by dinner and then the program.

The program for the evening was devoted completely to a discussion of a number of pertinent Society business matters. No scientific presentation was scheduled for this occasion.

V. P. Muenster, M.D., *Secretary*

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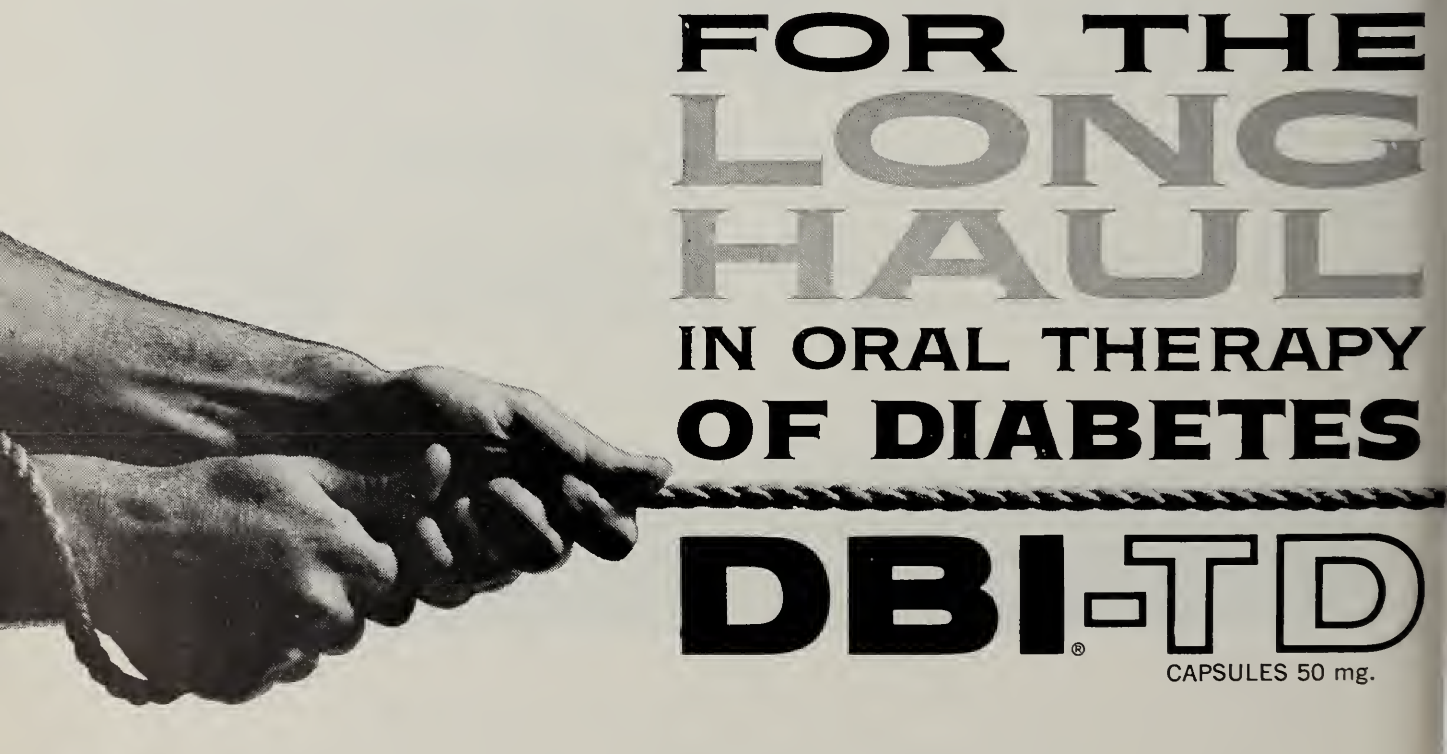
## SIXTH DISTRICT

### O. B. BARGER, HARRISONVILLE, COUNCILOR

### Henry, Johnson, Pettis, Saline County Medical Societies

A joint dinner meeting of the Henry, Johnson, Pettis, Saline and Lafayette-Ray County Medical Societies was held at the Pacific Cafe, in Sedalia on Wednesday night, September 26. The evening festivities began with a social hour, followed by dinner, and then the program.



Doctors and wives had dinner together.

Dr. Ray held the interest of his audience.

More than 80 people were present, including doctors, their wives and guests.

The scientific program was presented by C. Thorpe Ray, M.D., Professor of Medicine and Head of the Department, University of Missouri School of Medicine. Dr. Ray gave an interesting and quite practical discussion on "The Management of Renal Insufficiency." Numerous questions followed his formal presentation.

Following dinner the ladies held a separate meeting with Mr. Dick Sklar of Equitable Life Assurance Co. speaking to them on "How Valuable Is a Wife?"

A number of doctors and their wives from Whiteman Airforce Base attended. Mr. Jack Fox of Raytown, Candidate for Congress from the 4th Missouri Congressional District, was a special guest.

The next meeting of the joint group will be held at Warrensburg in November.

ALBERT R. MADDOX, M.D., *Secretary*
Pettis County Medical Society

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**long term convenience**... Once a day dosage — or at most twice a day — for great majority of diabetics makes DBI-TD simple and convenient therapy. Each dose lowers blood sugar gradually, smoothly, for about 12 to 14 hours.[6]

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**Important:** Before prescribing DBI-TD, the physician should be thoroughly familiar with directions for use, including indications, dosage, possible side effects, precautions and contraindications. Write for complete literature.

1. Pomeranze, J.: Clinical Med. 8:1155, June 1961. 2. Krall, L. P. and Bradley, R. F.: Geriatrics 17:337, May 1962. 3. DeLawter, D. E. et al.: J.A.M.A. 171:1786, Nov. 28, 1959. 4. Perkin, F. S.: J.A.M.A. 173:36, May 7, 1960. 5. Pearlman, W.: Phenformin Symposium, Houston, Feb. 1959. 6. Radding, R. S. et al.: Metabolism 11:404, April 1962. 7. Gold, A. et al.: Applied Therapeutics 2:137, 1960. 8. Brown, G. D. and Gabert, H.: Applied Therapeutics 4:451, May 1962. 9. Gold, A.: Applied Therapeutics 4:466, May 1962.

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### Lafayette-Ray County Medical Society

The August meeting of the Lafayette-Ray County Medical Society was held on August 14 at Maib's Cafe, at Lexington. Dinner was served, following a social hour. The after dinner program consisted of a discussion of the possibilities and problems of carrying out a tuberculin skin testing program to include all school children of Lafayette County. The program was outlined and presented by Miss Smith, Lafayette County health nurse, who pointed out the need for such testing as well as the need for local physician cooperation.

Following this presentation, there was a general discussion by members in which it was concluded that all physicians present felt that the program was definitely needed and that each would cooperate in any way possible to carry out the program within his local school district.

Wayne Boydston, M.D., *Secretary*

### Meeting of September 11

The September meeting of the Lafayette-Ray County Medical Society was held on September 11 at Maib's Cafe, Lexington. A social hour was followed by dinner. The meeting was called to order by President George Davault.

A letter from the State Department of Health, written by H. M. Hardwicke, M.D., Acting Director, concerning the use of oral polio vaccine was read to the group. A discussion was then held concerning the possibility of setting up a massive immunization program to cover the communities of both counties in the near future. It was decided that for the program to be a success, each community must first be organized and a community wide approval must be obtained.

President George Davault suggested that the matter be tabled for the present time until communities were polled and approval was obtained. An educational program was not scheduled.

Wayne Boydston, M.D., *Secretary*

### West Central Missouri Medical Society

The regular meeting of the West Central Missouri Medical Society was held Thursday evening, September 13, at the Nevada Country Club. This meeting was the third annual meeting that the Society has held for the coaches of the high schools of the neighboring counties as well as the component counties. The programs have been on athletic injuries, put on as symposiums. The program this year came from the University of Missouri Athletic Department.

M. U. Trainer Wappel gives a demonstration.

Dr. Glenn McElroy, orthopedic surgeon, Columbia, discussed "Ankle, Knee and Muscle Injuries" with slide demonstration. Mr. Fred Wappel, Trainer for the Missouri University Athletic Department, demonstrated the various wraps used on these extremities and spoke on prevention as well as treatment and taping of such injuries. Harry Smith, Freshman Football Coach, University of Missouri, spoke relative to the preparedness of a football player and particularly pointed out the fact that the player needed brains as well as brawn. He spoke of the high scholastic rating of the top players as compared to those not so good. This was a fine program and we are indeed appreciative of the efforts put forth by these men to bring such a fine program.

There was an excellent turn-out of doctors and coaches.

There were 44 coaches and assistant coaches attending this meeting. Dean Wilson of the University of Missouri School of Medicine; Ray McIntyre, Field Secretary of the Missouri State Medical Association, and Mr. P. V. McCoy, editor of the *Nevada Daily Mail*, were also present. Twenty-three doctors from the Society and sev-

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eral from the counties nearby attended. The Society feels that this annual symposium on athletic injuries is an important one and well worth the effort that is put forth to bring such a fine program to the coaches. They were given demonstrations and information of great value, and to be able to properly apply this will certainly be of value to their players.

Following the scientific program a short business meeting was held with President Don Giesler of Osceola presiding. The question of whether the Society would join with the State Division of Health in sponsoring oral polio vaccination programs was approved.

The next meeting will be in Eldorado Springs at which time one of our representatives in Congress, Dr. Durwood Hall, Springfield, will be the guest speaker.

Carter W. Luter, M.D., *Secretary*

## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid Missouri County Medical Society

A dinner meeting of the Mid Missouri Medical Society and the doctors' wives was held in the College Inn at the Edwin Long Hotel, Rolla, Thursday night, September 27. The evening festivities began with a social hour followed by dinner and then an outstanding program presented by a panel of cardiologists from the University of Missouri Medical School on "Recent Advances in Cardiac Surgery." Panel members were: Hugh E. Stephenson Jr., M.D., Surgeon; Harvey Stoeckle, M.D., Pediatrician; John Schuder, Ph.D. in Electronics; John M. Martt, M.D., Internist.

Physicians and their wives from Fort Leonard Wood Clinical Society were also invited to be present on this occasion. The program was sponsored by the MAGP in cooperation with the Postgraduate Committee of the University of Missouri Medical School. It is acceptable for two hours Category I Credit by the Academy of General Practice. Members of the entire Ninth Councilor District of the MSMA received invitations to this meeting.

M. K. Underwood, M.D., *Secretary*

## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Mineral Area County Medical Society

James G. Janney Jr., M.D., Section on Cardio-Vascular Disease, St. Louis University Medical School, spoke at a meeting of the Mineral Area County Medical Society, Thursday night, September 22.

This first fall session of the Society was held in the Clinic Building of the State Hospital at Farmington. Dr. Janney spoke on the subject, "The Medical Management of Arteriosclerotic Heart and Vascular Disease." The program was sponsored jointly by the MAGP, St. Louis University Medical School and the Medical Education and Hospital Committee of the MSMA.

Paul Dennis, M.D., *Secretary*

## RAMBLINGS OF THE FIELD SECRETARY

*(Continued from page 1096)*

participation was encouraged. A profitable general discussion concluded each session.

The Missouri Health Council is now composed of more than 40 state-wide organizations with a fundamental interest in health and a number of county health councils. It was formed in 1947 with the following objectives: "To bring together state-wide organizations, agencies and county health councils, with a fundamental interest in health, for discussion, debate and interchange of opinions and planning; to serve as a clearing house on health problems and programs; to activate joint planning which will encourage coordination of efforts."

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# From the Medical Schools

## ST. LOUIS UNIVERSITY

### New Appointment

Dr. John P. Wyatt has been appointed director of the department of pathology at the St. Louis University School of Medicine and pathologist-in-chief of the University's group of hospitals.

Dr. Henry Pinkerton, who has directed the department since 1939, has asked to be relieved of duties to devote additional time to teaching and research, it has been announced by Dr. G. O. Broun, dean.

Dr. Wyatt has served as professor of pathology and associate director of the department since 1951, having joined the medical faculty in 1949. He has been chief consultant in pathology to St. Louis County since 1950.

Born in Winnipeg, Canada, he was educated at the University of Manitoba, where he received the doctor of medicine degree. He took his post-graduate studies in pathology at the University of Toronto and at Harvard Medical School where he was a Littauer Fellow.

Dr. Wyatt's research investigations deal with emphysema, asthma, chronic bronchitis and other industrial lung diseases. He was lectured extensively here and abroad on the pathology of emphysema.

Dr. Pinkerton, a graduate of Harvard Medical School, was assigned the "Kathleen McBride Love Kelley Chair of Pathology" in 1955 for his distinguished research. The donor, William McBride Love, established the chair in memory of his mother.

Dr. Pinkerton is engaged in research into viral and rickettsial infections, spread and growth of cancer cells in various organs and tissues, experimental production of hypogammaglobulinemia, toxoplasmosis and salivary gland virus infections.

### Appointments

Twenty-six appointees have joined the medical faculty. They are: Dr. David L. Beato, instructor in internal medicine; Dr. R. William Burmeister, instructor in internal medicine; Dr. John F. Carter, instructor in internal medicine; Dr. Louis S. D'Agrosa, instructor in physiology; Dr. Alan F. Denk, instructor in surgery; Dr. John T. Dolan, instructor in surgery; Dr. Daniel J. Hagan, instructor in radiology; Dr. Ronald E. Hoffmann, instructor in orthopedic surgery; Dr. William M. Irvin, instructor in psychiatry; Dr. Max Jellinek, instructor in biochemistry (assigned to the department of surgery); Dr. Rolf J. Krojanker, instructor in neurology and psychiatry; Dr. Robert J. Leider, instructor in psychiatry; Dr. James F. McCool Jr., instructor in internal medicine; Dr. Herman M. Meyer, instructor in internal medicine; Dr. Janice Y. Robinson, instructor in pediatrics; Dr. John M. Tierney, instructor in internal medicine; Dr. Lester E. Wall, instructor in pediatrics; Dr. John R. Weber, instructor in orthopedic surgery; Dr. Joyce E. Devine, senior instructor in neurology and psychiatry; Dr. Leonard F. Fagan, senior instructor in pediatrics; Dr. Charles A. Nigh, senior instructor in surgery; Dr. Robert M. Woolsey, senior instructor in neurology and psychiatry; Dr. Robert W. Dorner, assistant professor of biochemistry (assigned to the department of medicine); Dr. Chao nien Sun, assistant professor of pathology; Dr. Lloyd W. Hedgecock, professorial lecturer in microbiology, and Dr. John W. Higgins, associate clinical professor of psychiatry.

### Grants

The Division of Gastroenterology of the Department of Medicine has been awarded grants totaling $70,824 by the United States Public Health Service for the support of two research projects under the direction of Dr. William A. Knight Jr., associate professor of internal medicine.

A new grant totaling $46,975 for a two year period will support investigation of the animal and the human pancreas.

Dr. Knight will be associated with Dr. Guy E. van Goidsenhoven, assistant professor of medicine; Dr. George E. Gantner Jr., associate professor of pathology, and Dr. Goronwy O. Broun Jr., assistant professor of medicine.

In their research, the physicians will study patients with liver and pancreatic disease, including malignancies of these organs.

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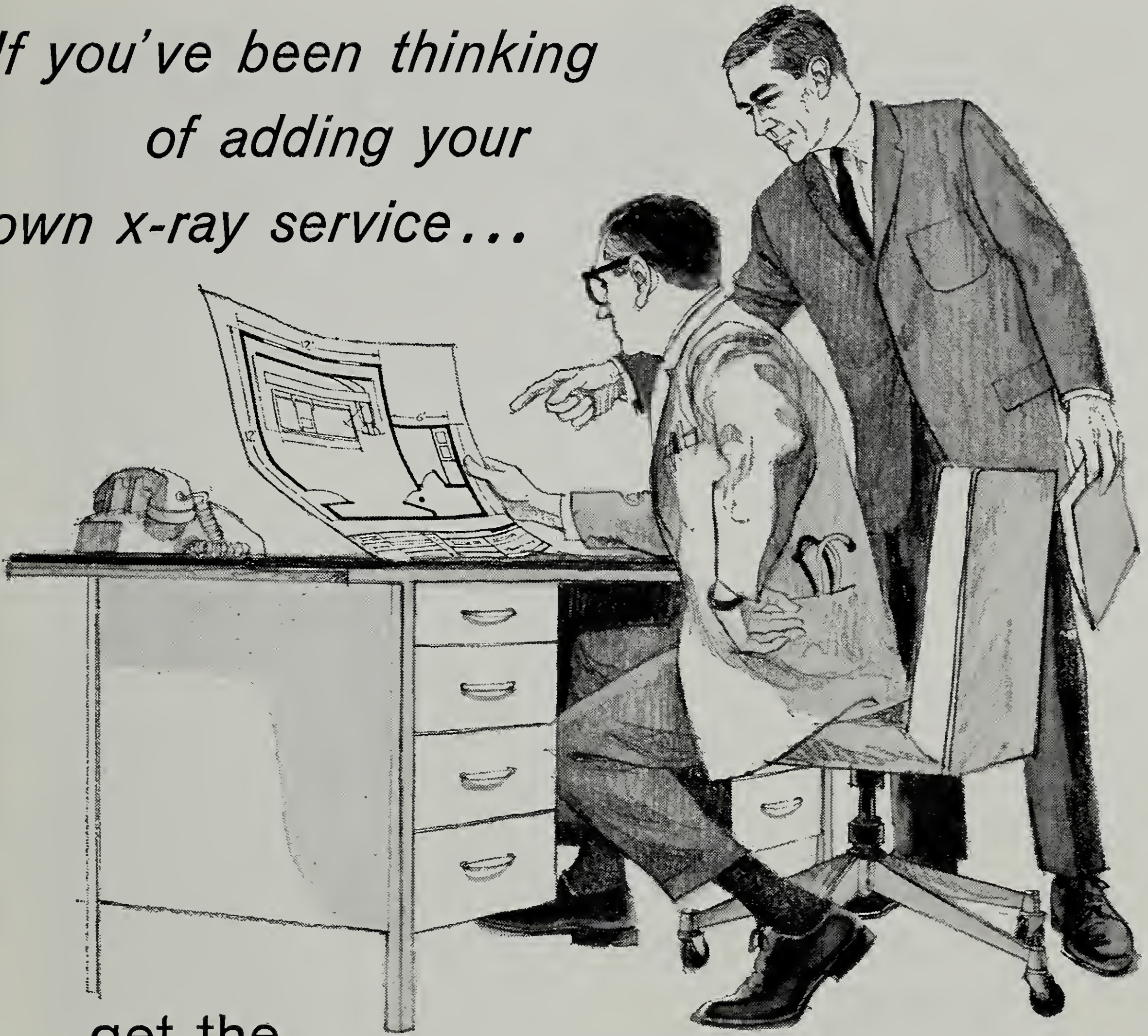

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pancreas, to determine its rate of metabolism and route of excretion. The results of these studies may aid in establishing new diagnostic procedures in determining early pancreatic disease and pancreatic function in humans.

A second grant, a renewal award totaling $15,824, will support a study of enzymes in the normal and diseased pancreas.

By analyzing body fluids, tissues and blood, they will evaluate the enzyme activity in these systems. This study will also include analysis of other enzymes elaborated by the pancreas.

Investigations will be conducted in the Gastroenterology Laboratory directed by Dr. Knight at Firmin Desloge Hospital. Correlated studies will be made in the Radioisotopes Laboratory at Firmin Desloge Hospital. Dr. Knight is Midwest Area Consultant in Internal Medicine of Veterans Administration Hospitals throughout the states of Arkansas, Kansas, Louisiana and Missouri.

The Department of Biochemistry has been awarded a $79,000 grant for a three year period by the United States Army for continued support of irradiated food studies. It is the fourth year the U. S. Army has granted support for the studies, bringing total allotments to $161,000.

Dr. Edward A. Doisy Jr., professor of biochemistry, is the principal investigator in the project which involves a study of the fitness of irradiated food for human consumption. Dr. John T. Matschiner, assistant professor of biochemistry, is conducting the nutritional aspects and assays for blood clotting.

In their research, they have found that rats fed irradiated beef, without vitamin K added, are subject to hemorrhages. Other workers have shown that beef contains only minute amounts of vitamin K; irradiation or cooking tends to halve this already low level.

Purpose of the program is to ascertain if irradiated foods, which do not require refrigeration, can be used to feed troops and civilians in the event of nuclear warfare.

**Lectures Abroad**

Dr. Alrick B. Hertzman, director of the department of physiology, participated in two scientific meetings in Leiden, Holland, during the month of September. Two other faculty members, Dr. Karl G. Lark, associate professor of microbiology, and Dr. Leo C. Senay Jr., associate professor of physiology, participated in one of the meetings.

Dr. Hertzman led a discussion on "Peripheral Circulation and Heat" before the International

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Bibliography: 1. Cohen, A., et al.: J.A.M.A. 165:225, 1957. 2. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 3. Moravec, C. L. and Moravec, M. E.: Clin. Med. 7:2322, 1960. H-416

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Symposium of Temperature Acclimation which met Sept. 5 to 7. He also delivered a paper before the International Congress of Physiological Sciences on "Skin Pulse and Heat Transfer" meeting in Leiden Sept. 11 to 18. Dr. Lark delivered a paper before the same meeting, while Dr. Senay participated in discussions at the Congress.

Dr. Daniel E. O'Reilly, assistant professor of clinical orthopedic surgery and director of rehabilitation at the University's group of hospitals, gave a scientific paper in Athens, Greece, in August. He spoke on "Diagnosis and Treatment of Cerebral Palsy" at the Vouza Rehabilitation Center.

## WASHINGTON UNIVERSITY

### Midwest Award

Dr. Oliver H. Lowry, professor and head of the department of pharmacology at Washington University School of Medicine, has been selected to receive the Midwest Award, highest honor of the St. Louis Section of the American Chemical Society. The award, in recognition of his research on the chemistry of individual nerve cells, will be presented at the Society's annual banquet, November 3. Dr. Lowry has developed ultramicro biochemical technics for investigating the histochemistry of brain cells. He was also cited in the award for his teaching ability and his inspiration to young faculty members.

Among other awards presented recently was one to Dr. Kenneth Simon, assistant in ophthalmology from the Fight for Sight of the National Council to Combat Blindness, Inc., and the Association for Research in Ophthalmology. It was won in conjunction with Dr. Sjoerd L. Bonting of the National Institute of Neurological Diseases and Blindness in Bethesda, Md.

Dr. William R. Cole and Dr. Harvey R. Bernard recently were awarded second prize in the annual Speidel awards offered by the United States Section of the International College of Surgeons. They received the prize for a paper entitled "Origin of Abdominal Wound Contaminates."

### Trips and Meetings

Dr. Stuart F. Schlossman, trainee in medicine, took part in a symposium on gamma globulin at the National Research Council October 25. He discussed the structure of gamma globulin.

Dr. William Harrington, associate professor of medicine, took part in the Kansas City Southwestern Clinical Society fall clinical congress.

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He was on a panel discussing various hematological diseases. He will also speak at a postgraduate course being sponsored by the Chicago Medical Society in November on thrombocytopenic purpura.

Dr. Carl V. Moore, Busch professor and head of the department of medicine, will be Tyndale lecturer and visiting professor at the University of Utah in Salt Lake City in November.

Dr. Lillian Recant, associate professor of medicine and preventive medicine, recently spoke at a University of Kansas postgraduate symposium on diabetes. She discussed management of adolescent diabetes and utilization of various sugars in diabetes management.

Dr. Paul R. Hackett, associate professor of anesthesiology, participated in the refresher course preceding the meeting of the American Society on Anesthesiologists held recently in New York City. He spoke on hypothermia for cardiac surgery. Dr. Felix G. Freund, assistant professor, and Dr. Ronald K. McGregor, assistant resident, also attended the Society meeting.

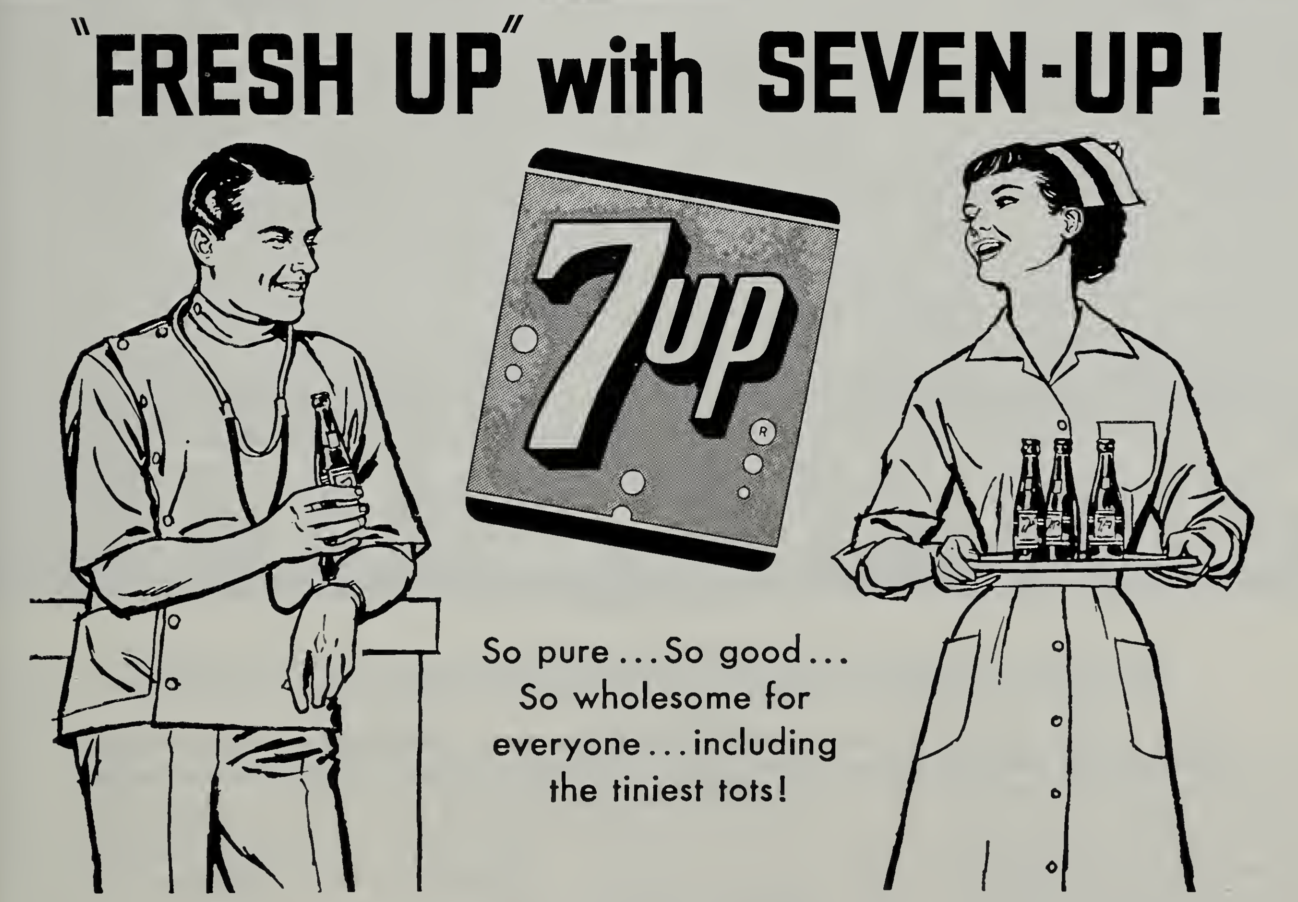
Dr. Alexis F. Hartmann Jr., assistant professor of pediatrics, presented the pediatric section of symposium on fluid therapy at the Black Hills District Medical Society meeting in Rapid City, S. D., in October.

Attending the American Urological Association South Central Section meeting in Mexico City in October were Dr. William Bowles, instructor in urology, and Dr. Harry Ellis, resident in urology. Dr. Ellis presented a paper which was his entry in the resident's essay contest.

Dr. Jessie L. Ternberg, assistant professor of surgery, was made a fellow of the American College of Surgeons at their annual clinical congress held in Atlantic City October 15 to 19. Participants on the program from Washington University included Dr. Harvey R. Butcher Jr., associate professor of surgery; Dr. Louis T. Byars, associate professor of clinical surgery; Dr. Paul A. Cibis, associate professor of clinical ophthalmology; Dr. Carl E. Lischer, assistant professor of clinical surgery; Dr. C. Alan McAfee, assistant professor of clinical surgery; Dr. Joseph Oguara, professor of otolaryngology; Dr. Kenneth Serkes, assistant professor of surgery, and Dr. Arthur H. Stein Jr., associate professor of orthopedic surgery.

Dr. Loretta Cass attended the meeting of the Council of the American Association of Psychiatric Clinics for Children in New York in October. She was recently elected to the board of this organization as one of the two national representatives from clinical psychology.

Participating in the 35th scientific sessions of the American Heart Association in Cleveland in



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October were Dr. Dominic Moore-Jones, instructor in medicine, and Dr. H. Mitchell Perry Jr., assistant professor of medicine. They collaborated on a paper entitled "Autoradiographic Localization of Hydralazine in Blood Vessels," and Dr. Perry also took part in a symposium on medical management of hypertension.

### Visitors

Dr. Tomio Ogata, professor emeritus of serology at the University of Tokyo, visited the School of Medicine recently. Dr. Ogata is president of the Japan Medical Library Association.

Guest in the division of anesthesiology in October was Dr. LeRoy D. Crandell, professor and chairman of the section on anesthesiology at the Bowman Gray School of Medicine of Wake Forest College.

## ELLIS FISCHEL STATE CANCER HOSPITAL

### Staff Changes

Drs. John H. Beggs and Verner Waite were appointed American Cancer Society Clinical Fellows in Surgery and Dr. V. M. Carnes was appointed assistant pathologist at the Cancer Hospital for the period of July 1, 1962 through June 30, 1963.

### Meetings and Presentations

Dr. Jose M. Sala, chief radiotherapist, attended the Tenth International Congress of Radiology in Montreal, Canada, from August 26 to September 1.

Dr. Norman Asel, Professor of Dermatology at the University of Missouri, discussed the diagnosis and treatment of benign conditions mimicking cancers of the skin at the 3:00 p.m. medical staff conference at the Cancer Hospital on August 30.

Dr. A. M. Evans discussed the medical management of persistent carcinoma of the breast at the medical grand rounds at the University of Missouri on August 30.

Dr. John S. Spratt Jr., chief surgeon, returned from the Eighth International Cancer Congress, Moscow, U.S.S.R., on August 15. Two of his papers were presented at the congress, one on the rates of growth of pulmonary cancers and one on polypoid tumors of the large intestine and rectum. Following the congress, he worked at the Roentgendiagnostik Institute, Allmänna Sjukhuset, Malmö, Sweden (University of Lund) for

*(Continued on page 1124)*

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1. Meyers, G. B.: Ind. Med. & Surg. 26:3, 1957. 2. Murray, R. J.: N. Y. St. J. Med. 53:1867, 1953.

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# Missouri Medicine in Review

## FORTY YEARS AGO

Dr. John R. Caulk, St. Louis, has been elected president of the Southwestern Branch of the American Neurological Association.

Carpenters working on the construction of the United States Hospital at Jefferson Barracks went out on a strike recently because the sheet metal workers were given the job of putting metal strips on windows. The carpenters claim that the work should have been done by them.

Joplin will soon have another hospital, a $50,000 residence having been given to the Methodist Church to be converted into a hospital. Joplin at present has only one Hospital, St. John's, a 100-bed institution.

Dr. D. H. Dolley, formerly pathologist at the University of Missouri, has accepted the position of head of the Department of Pathology at St. Louis University School of Medicine, and Dr. E. H. Muir, of Harvard University Medical School, has been appointed instructor in Pathology at the same school.

For what is said to be the first time in Colorado, a prescription for a sick patient was recently rushed through by government air mail service. Airplanes have already caused marked changes in the commerce of this country, and indications are that we have hardly begun to realize their possibilities.

The annual dinner of the Kansas City Obstetrical and Gynecological Society was given on Thursday evening, Sept. 28, at Hotel Lucerne, Kansas City. Dr. Roland E. Skeel of Los Angeles, President of American Association of Obstetricians and Gynecologists was guest of honor.

## TWENTY-FIVE YEARS AGO

The Southeast Medical Association held its sixty-first annual session at Fredericktown, October 12 and 13. About 60 physicians attended, including Dr. George W. Vinyard, Jackson, the only living charter member. The Society was organized sixty years ago last April. Dr. W. Harry Barron, Fredericktown, was installed as president and Dr. H. M. Henrickson, Poplar Bluff, was elected president-elect. Dr. M. H. Shelby, Cape Girardeau, was elected corresponding secretary to succeed Dr. John D. Van Cleve, Malden, who had served for six years. Dr. Van Cleve was elected treasurer to succeed Dr. Paul Baldwin, Kennett. Dr. R. C. Kitchell, Sullivan, was reelected recording secretary for his fourth year. Poplar Bluff was selected for the 1938 meeting.

The Committee on Cancer met at Fulton at the State Hospital on October 4 at 3:30 p.m. The members of the Committee, Drs. Ellis Fischel, St. Louis; Earl C. Padgett, Kansas City and Dudley A. Robnett, Columbia, were present.

The last few weeks have witnessed the appearance of a few cases of poliomyelitis within the borders of the state. In neighboring Illinois the number of cases has been such as to cause the closing of the schools in some cities. To date there has been no evidence of a real epidemic of infantile paralysis in Missouri. In recent years interest has been focused upon the use of nasal sprays as a means of preventing the invasion of the virus of poliomyelitis. It may be stated without equivocation that no adequate scientific evidence exists to support the assumption that these sprays are of the slightest value.

The notorious Norman Baker, of Muscatine, keeps right on curing (?) people of cancer after he has lost his suit against the American Medical Association with all of the attendant unfavorable publicity. True, his monthly receipts dropped from $75,000 to a mere $7,000.

## TEN YEARS AGO

Edward J. McCormick, M.D., Toledo, Ohio, President-elect of the American Medical Association, was the principal speaker at the annual

*(Continued on page 1124)*

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## CORRESPONDENCE

August 29, 1962
St. Louis, Mo.

*To the Editor:*

Dr. T. J. Cooper's editorial in the August issue of Missouri Medicine is an affront to the intelligence of the other members of the medical profession. This is but another example of the frantic efforts of the American Society of Clinical Pathologists to divert attention from the real issues confronting the field of laboratory medicine.

Pathologists with private laboratories are encountering competition from several sources. They therefore shrewdly attack the non-ASCP technologists who in some cases are operating competing laboratories, and admonish the practicing physician with such propaganda as, "is a layman your 'Consultant' in Laboratory Medicine?" The truth is that most of the members of the ASCP are unable to compete with individuals, in private laboratories, holding advanced degrees in Biochemistry and Bacteriology and whose knowledge in these fields is unquestionably superior to that of most pathologists.

Another deficiency which should be causing the ASCP a good deal of concern is its obvious inability to supply the medical field with an adequate number of properly trained technicians. In spite of this the educational prerequisite has been raised to three years of college which is simply ridiculous. The motive for the requirement is obviously to increase the "prestige" of those who are already members of the American Society of Medical Technologists. It is hardly considerate of the patient, however, who in the final analysis pays the bill, to invoke a very costly unreasonable and unnecessary prerequisite. Instead of alleviating the shortage of technologists this has only served to intensify it, and has channeled many of the young people interested in the field into the private schools.

Several of the good private schools of medical technology have formed a National Council with the goal of raising and standardizing the quality of curriculum and instruction thereby benefiting the entire medical field. The ASCP has been repeatedly contacted in an effort to secure its help in reaching this goal, but that society has chosen to obstruct and deter, rather than assist. The National Council's most recent attempt to cooperate with the ASCP was met with the usual rebuff, the reply was NO once again.

As Dr. Cooper states, "If you, as physicians, are called upon to counsel high school students in regard to the field of medical technology or if you are hiring someone for your office or in your hospital laboratory, inform yourself of the significance of the school and the training that is available to the prospective student and/or graduate." I feel that most practicing physicians will conclude, as I have, that many times the wiser selection is the private school of medical technology.

*Sincerely yours,*
Stanley Reitman, M.D.

## FROM THE MEDICAL SCHOOLS

*(Continued from page 1120)*

10 days, reviewing cancer detection technics employed there before returning home.

The Cancer Commission and representatives of the Division of Health held their monthly meeting at the Missouri Hotel, Jefferson City, on August 30 and approved the prospective plans for the expansion of the research and service facilities of the Cancer Hospital.

A committee of affiliation has been established between the Ellis Fischel State Cancer Hospital and the University of Missouri School of Medicine. The purpose of this committee is to coordinate research efforts, postgraduate programs and the training of residents and students from the School of Medicine at the Cancer Hospital under the Cancer Hospital Staff. The chairman of the committee is Dr. Joseph P. Russell, Director, Section of Hospital and Technical Services, Division of Health, with membership being composed of Dean Vernon E. Wilson of the University of Missouri School of Medicine, Dr. Milford T. Kubin, Medical Superintendent of the Cancer Hospital, and the heads of the respective departments at the two institutions.

## MISSOURI MEDICINE IN REVIEW

*(Continued from page 1122)*

banquet of the Mississippi Valley Medical Society in St. Louis on October 2. Among other speakers at the banquet was J. William Thompson, M.D., St. Louis, President of the Missouri State Medical Association.

The 66th General Assembly has given our municipalities an important tool in the form of a revenue bond law which will enable many communities to construct needed sewerage facilities which they could not finance earlier because of constitutional limitations on general obligation bonded indebtedness. The State Conservation Federation has established a Clean Streams Committee of which W. A. Bloom, M.D., Fayette, is Chairman.

# Capsule Clinics

- Delayed ovulation and nidation and inadequate development of the endometrium are factors of major importance in spontaneous abortion. Iffy, L. and Kerner, P. J., Obst. & Gynec. Brit. Commwth. **69**:598, 1962.

- Of 17,836 children admitted to hospital (6.5 per cent) developed infection (the majority being hospital acquired). Such infections were responsible for more than 2,000 extra patient days of hospitalization. Roy, T. E. et al., Canad. M. A. J. **87**:531, 1962.

- The number of successful cases following anastomosis after bilateral vasectomy is large enough to justify use of the procedure by more surgeons. Waller, J. I., and Turner, T. A., J. Urol. **88**:409, 1962.

- A study of one lactating psychotic patient treated with chloropromazine suggests that babies of mothers receiving large doses of this drug can be safely breast-fed. Blacker, K. H. et al., Am. J. Psychiat. **119**:176, 1962.

- Before "condemning" a patient with the stigmata of hypertension, greater use of electrocardiogram should be made to distinguish between systemic hypertension and hypertonia. Evans, W., Brit. Heart J. **24**:469, 1962.

- Exposure of the pregnant woman to fluoridated water has no effect on the caries incidence of the deciduous teeth of offspring. Carlos, J. P. et al., Pub. Health Reports **77**:658, 1962.

- Estrogen therapy in aged women has a salutary effect on urogenital regressive changes (vaginitis, urinary incontinence, uterine prolapse), and on the associated hygienic problems. Siegel, I. et al., Am. J. Obst. & Gynec. **84**:505, 1962.

- In a 7-month period, 46 children with Schistosoma mansoni were admitted to the Bronx Municipal Hospital Center. Nilodin (lucanthone hydrochloride*) therapy was effective in 41 of 45 children who returned for follow-up. Serious psychiatric disturbances observed in adults receiving Nilodin were not seen in these young patients. The incidence of gastrointestinal disturbances in Nilodin-treated patients was high but did not interfere with therapeutic effect. Einhorn, A. et al., Am. J. Dis. Child. **104**:62, 1962.

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# WASHINGTON

### Congress Adjourns

The Second Session, 87th Congress, adjourned on October 13 after the longest session in 11 years. The record of the 87th Congress on the President's program is mixed. However, from the AMA's point of view, the legislative results were generally on the plus side. The Administration's proposal for health care of the aged financed through social security was defeated. A 12 year legislative effort by the AMA and other organizations was fulfilled when Congress passed H.R. 10 and the President, denied a chance for a pocket veto and faced with the possibility of Congress overriding his veto, signed it as Public Law 87-792.

### Chronological Highlights

Following is a chronological résumé of the highlights of the session.

Jan. 10. Second Session convened with the Administration's aged care proposal, H.R. 4222, still before the House Ways and Means Committee.

Jan. 11. President Kennedy said in his State of the Union Message that "in matters of health, no piece of unfinished business is more important or more urgent than the enactment under the social security system of health care for the aged."

Jan. 25. Ways and Means Committee chairman Wilbur Mills declared that he did not support H.R. 4222.

Jan. 31. The Senate Finance Committee rejected a motion by Sen. Clinton P. Anderson (D., N. M.) to hold public hearings on the aged care issue no later than April 1, whether the House had sent a bill to the Senate or not.

Feb. 7. Rep. Thomas B. Curtis (R., Mo.) introduced a bill (H.R. 10117) which would permit a tax incentive for employers to establish health care benefits in employee retirement programs.

Feb. 15. The National Council of Senior Citizens for Health Care Through Social Security announced a four-point program, including a mass rally in New York and a "Cavalcade to Washington, D. C." to dramatize support for H.R. 4222.

March 24. Democratic National Chairman John M. Bailey attempted to link the AMA to the John Birch Society and was severely criticized.

March 27. President Kennedy met with 27 M.D.'s belonging to the Physicians Committee for Health Care for the Aged Through Social Security.

April 1. The Gallup Poll showed a 12 per cent drop—67 to 55 per cent—of people favoring the Social Security approach to health care of the aged.

April 4. Rep. Curtis of Missouri pointed out that the Physicians Committee did not demonstrate new support for H.R. 4222 since it was composed of "old faces" who had long been identified as supporters of the social security approach.

April 11. President Kennedy urged Congress to enact the Kefauver drug control bill (S. 1552).

April 16. Sen. John J. Williams (R., Del.) turned back the Kennedy Administration's plan to use civil service workers as a huge lobby to promote Administration programs.

May 1. Seven AMA leaders met with President Kennedy but there was no switch in position on either side and no talk of a compromise.

May 2. The *New York Herald Tribune* reported that six to 10 federal government employees in the White House Office had been working for more than three months to promote the Administration's plan of health care for the aged under social security.

May 9. Dr. F. J. L. Blasingame charged that HEW Secretary Ribicoff committed a criminal act by publishing a 159 page booklet which lobbied for the social security approach to health care of the aged.

May 16. United Press International reported that "a damaging and possibly fatal blow" was delivered to H.R. 4222 when Rep. Clark W. Thompson (D., Tex.), a member of Ways and Means, declared that he did not intend to vote for H.R. 4222.

May 20. Rallies in support of H.R. 4222 were held at Madison Square Garden, with the President as the featured speaker, and in 30 other cities. The rallies failed to draw expected crowds and were cancelled in Denver, Philadelphia, Dallas, San Francisco, Louisville, Atlanta and Birmingham. The "Motor Cavalcade" to Washington did not materialize.

May 21. The AMA answered President Kennedy with its own televised program "Your Doctor Speaks," featuring Dr. Leonard W. Larson

*(Continued on page 1152)*

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Across
Missouri

## State Government Takes on More and More Functions

The rapidly rising cost of Missouri state government—the cost has risen 95 per cent over the last 10 years and 479 per cent over the last 20 years—results chiefly from rising prices, wages and salaries; expansion of existing state services; and from the state government undertaking added functions, services and activities, according to a report by the Missouri Public Expenditure Survey. The report analyses these trends.

The part played by the undertaking of added programs in the cost of state government tends to be overlooked because it is difficult to ascertain. New programs become organized into the departmental structure of the state government and, for the most part, no separate cumulative accounting is kept of their costs.

The Survey examined the statutes, state reports and budget office and other records covering the period since the 1946-47 fiscal year to ascertain the extent to which new programs have been established and financed from the state's General Revenue Fund. That starting point was chosen because it marked completion of major changes in state government structure required by the adoption of the 1945 Constitution. Further, it encompassed most of the post-war period.

In the eight biennia covered by this report, 44 programs financed from the General Revenue Fund have been added by the state government. The 44 programs account for $48.3 million of the appropriations from general revenue for the current biennium.

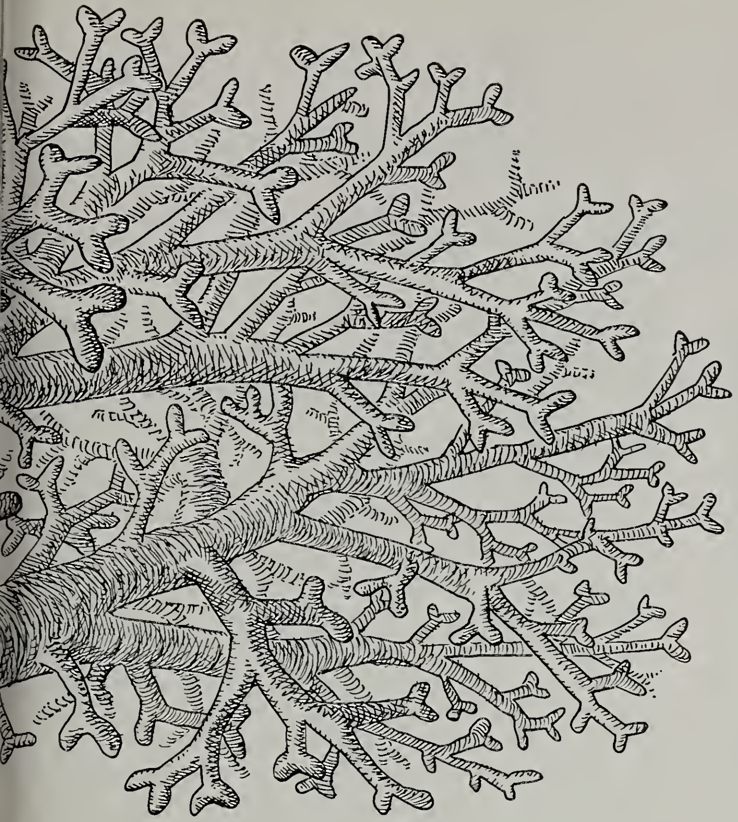
In the period covered by the report, appropriations from the General Revenue Fund have increased $211.7 million—from $91.4 million in 1945-47 to $303.1 million in 1961-63. The programs that have been added account for 23 per cent of that increase. The cumulative cost of these 44 new programs over that period has been $187.2 million.

The $48.3 million appropriated in the current biennium for the programs that have been added in the period of eight biennia is more than half of the total appropriations made from the General Revenue Fund at the beginning of the period. At the start of the period, as has been noted, appropriations from the General Revenue Fund totaled $97.4 million.

A considerable number of the added programs now require significant individual appropriations. Current appropriations for some of the larger programs are: Building aid to reorganized school districts, $2.7 million; four year medical and nursing school, $2.9 million; state employees' retirement system, $3.2 million; social security taxes for state employees, $3.4 million; St. Louis Training School, $3.7 million; University Teaching Hospital, $6.8 million; and St. Louis State Hospital, $11.2 million.

In each of the eight biennia covered by this report, additional programs were established. In the 1947-49 biennium, seven new programs were financed for the first time. Four additional programs were added in the 1949-51 biennium, and the trend has continued to the present biennium, when four programs were added, bringing the total to 44. The four programs added in the current biennium, together with their appropriations, are: Aid to junior colleges, $734,145; Income Tax Withholding Unit, $464,415; Fordland Honor Camp, $55,500; and Water Resources Board, $50,000.

During most of the period covered, the new programs that were added were established without enactment of new or increased taxes to finance them. Increasing yields from the existing tax structure and accumulated balances were relied upon to finance them. Until recent years, that proved sufficient. The last two legislatures, however, have found it necessary to enact additional taxes to finance appropriations from the General Revenue Fund. The taxes enacted were a use tax and increased liquor, beer and cigarette taxes. In addition it appears the legislature which convenes in January will find it necessary to enact still more taxes. This means that further new programs of substantial size or major expansion of existing programs will have to be considered in terms of the added taxes they will require.



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# Missouri Academy of General Practice

The 1962 State Officers Conference of the AAGP was held at the Muehlebach Hotel, Kansas City, Missouri, September 15-16. Approximately 200 were registered for this down-to-earth session for a studied look into Academy activities and current medical affairs. AAGP President James D. Murphy of Fort Worth, Texas, opened the Conference with a strong plea for all Academy members to push hard enough and long enough to develop new momentum in the Academy that will assure those who follow a place in medicine as family doctors. He explained that the AAGP Board of Directors had established a long range planning committee, a committee which would critically review the objectives and activities of the Academy and recommend to the Board a realistic program of action. This committee is composed of the Chairman of the Board, President, President-Elect, Vice President, Treasurer and Speaker of the Congress of Delegates.

Dr. Julius Michaelson, Chairman of the AAGP Board of Directors, discussed the recommendations of the long-range planning committee which have already been presented to the Board and approved and are, (1) designed to produce more well qualified family doctors to meet the needs of the American public and (2) to assure these family doctors of hospital privileges commensurate with their training and ability. He stated that each of the recommendations has been assigned to a specific commission or committee for implementation.

Dr. Albert E. Ritt, President-Elect of the AAGP, explained how the recommendations can and must be implemented.

On Sunday morning, September 16, the conference was privileged to hear a stirring address by Edward Annis, M.D., President-Elect of the American Medical Association. He stressed the signal role the general practitioner can and should play in community leadership. A feature attraction of the conference was the entertainment at the Saturday night banquet presented by the "Greene County Missouri Boys" with their outstanding program of medical songs and parodies.

Missouri Academy officers attending the conference were: Roy Pearse Jr., President; Walter Gunn, President-elect; Jack Pearl, Vice-President; C. G. Stauffacher, Secretary-Treasurer; Edson Carrier and Barney Finkel, Board of Directors members; Cecil Leitch, Chairman, Board of Directors; W. J. Shaw, past president, and William C. Allen, medical editor of *The Missouri Family Doctor.*

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## WASHINGTON

*(Continued from page 1146)*

and Dr. Edward A. Annis. In four days, 24,000 letters were written to the AMA, 90 per cent of which voiced opposition to H.R. 4222.

June 13. Rep. Mills declared that he was not proposing any compromise in lieu of H.R. 4222 to which he was still opposed.

July 5. President Kennedy expressed "strong support" for the Anderson-Javits aged health care amendment which was introduced in the Senate to by-pass the Ways and Means Committee.

July 17. A significant victory for American medicine was achieved as the Senate voted to table—in effect kill—the Anderson-Javits amendment.

July 20. President Kennedy signed the welfare bill (H.R. 10606) as Public Law 87-543. It also allows states to operate public assistance plans for the aged, blind, disabled, and the Kerr-Mills Medical Assistance for the Aged program as a single plan. AMA had favored this unification.

July 22 and 25. Gallup Poll showed sentiment for the Administration's health care bill slipping again in midwest and east.

Aug. 1. President Kennedy, citing the Thalidomide episode, urged Congress to adopt the Administration-proposed drug bill (H.R. 11581 and H.R. 11582).

Aug. 14. In a surprise move, the Ways and Means Committee passed the Curtis bill (H.R. 10117).

Aug. 23. The Senate by a vote of 78 to 0 passed the Kefauver drug control bill (S. 1552).

Sept. 7. The Senate passed, with amendments, H.R. 10.

Sept. 11. The House passed the Curtis bill (H.R. 10117).

Sept. 17. Senate-House conferees reached a compromise agreement on H.R. 10.

*(Continued on page 1194)*

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1. Ford, R. A., and Blanchard, K: Journal-Lancet 78:185, 1958.

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# Woman's Auxiliary

Our hats are off to the members of the Marion-Ralls-Shelby Auxiliary, our hostesses in Hannibal, October 17 and 18, for two wonderful days of education and fellowship. This annual state Fall Board Meeting and Conference has become the highlight of our year, the time when we come together to share our experiences, seek solutions to our mutual problems and strengthen our purpose to provide community leadership in many needed areas.

Mrs. J. Martyn Schattyn

An experience such as this recent fall meeting should impress us with the vitality of our component auxiliaries and their untapped capabilities. Working on details of arrangements, decorations and entertainment, the girls of Marion-Ralls-Shelby demonstrated in no uncertain terms that they have the personnel, the know-how and the spirit that make for an outstanding auxiliary. We extend to them the most sincere thanks of all those privileged to be their guests. They made us feel special and set the tempo of cooperation and understanding which we hope will remain with us during the coming years. We will long treasure the charming favors which were made for us, and the lovely memory of the beautiful legendary spots in Hannibal.

The program of the meeting was prepared with our priority projects in mind—Legislation, Mental Health and Membership. We were fortunate to have as our speaker on legislation Mr. Frank Woolley, a field representative of the American Medical Association, who brought us up to date on both the state and national pictures. To add to our interest in legislation, Mr. Thomas Fox, Executive Assistant to Mr. T. R. O'Brien in the Missouri State Medical Association office in St. Louis, obtained for us two excellent films from the national office which we presented as extracurricular bonuses between our regular sessions.

Our speaker on mental health was Dr. George A. Ulett, Acting Director, Division of Mental Diseases, State of Missouri, who, with the assistance of Mrs. N. Francille Bailey, Community Relations Coordinator of this Division, presented his case for a new mental health setup in Missouri. His sincere belief in, and his clear statistics on the value of three intensive treatment centers—in Kansas City, Columbia and St. Louis—impressed his listeners and they felt that his is a worthwhile program. In support of Dr. Ulett, the assembly passed a resolution during its business session the following morning approving his program "in principle," final approval being subject to action taken by the Missouri State Medical Association's Council at its December meeting.

Organization and membership will always be the key to the real vitality of the Auxiliary. Being a "closed" organization, our source of members is limited, but our potential is the "cream." We take it for granted that physicians, by virtue of their educational backgrounds, select wives of similar backgrounds who are searching for a purpose in life, who are excited by the challenges Auxiliary work should present. To this type of woman we must make our programs appealing so that she can feel that she is making a community contribution while she herself experiences a feeling of satisfaction and fulfillment.

In presenting a most interesting discussion on membership, Betty Sutter, National North Central Regional Vice President, and her panel members, pointed up the need to attract good leaders, the need to use new ideas and methods and the desirability of "in-job" training for potential civic service. Once we have enrolled a member the joys of fellowship should keep her coming, the knowledge that she is really needed will be her reward, and the pride she feels in being a vital part in a growing organization will give her a reason to urge others to join.

Following her panel, Betty Sutter took the opportunity to tell of the broadened scope of National Auxiliary communications which she was largely instrumental in bringing about. Recognizing the need for some other avenue besides the *National Bulletin* to keep members

*(Continued on page 1218)*

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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A. McCHESNEY EVANS, M.D., *Columbia*

# The Chemotherapy of Cancer

**Cancer Chemotherapy is a rapidly expanding field which is changing constantly with the search for drugs that are effective. Alkylating agents, anti-metabolites, hormones, antibiotics and miscellaneous agents are discussed.**

**Dr. Evans is Chief of Internal Medicine at the Ellis Fischel State Cancer Hospital.**

Since surgery and radiotherapy are methods of treatment which can cure cancer, chemotherapy, with only palliation to offer, continues in an inferior status. Yet much of the current publicity and future hope for better treatment lies in the growing field of chemotherapy. The term "chemopraxis"[9] has been suggested to replace the term chemotherapy for the reason that much chemical treatment is practiced, but little effective therapy is accomplished. When Ellis Fischel State Cancer Hospital was opened in 1940, chemotherapy consisted of the use of such agents as Fowler's solution of potassium arsenite and urethan on a small number of patients. Now more than 200 patients annually are receiving courses of palliative and adjuvant chemotherapy under the department of Internal Medicine.

The recent reports of five year survivals of patients having choriocarcinomas treated with methotrexate[8] heralds the first possible "cure" ever obtained for a human neoplasm by the use of systemic chemical agents. Among the cases at Ellis Fischel State Cancer Hospital, this rare tumor (one per 20,000 pregnancies) has been seen only once, and that single tumor was atypical. The patient expired long before the development of methotrexate. The "five year cure" of choriocarcinoma may be attributed to peculiarities of both the tumor and host. First, it is known that the folic acid requirement of trophoblastic tissue is the highest of any human tissue. This would suggest that a "counterfeit" folic acid such as methotrexate would do the maximum damage to the cancer with the least harm to the host. Since this tumor is partly of "foreign" origin and has one half of its genetic elements from the impregnating male cell, there may be a foreign protein factor of host resistance to assist in the destruction of the highly malignant choriocarcinoma.[2] The discovery of two such specific biochemical mechanisms which may operate against a unique tumor suggests that cancer may consist of many diverse diseases which merely have the misleading common appearance of producing new growths. The study of cancer may be at the stage which is comparable to the primitive classification of all infectious disease into a single category labeled febrile illness.

Another recent advance occurred when the Food & Drug Administration allowed the release of vinblastine (Velban) in February of 1961. Related agents are being developed from this drug such as leurocristine now in clinical trial. Encouragingly, vinblastine has no known structural relationship to agents presently in use, and cross resistance has not been reported. It was found during a search for hypoglycemic agents of plant origin and was selected for chemotherapy trial because of bone marrow toxicity noted in routine screening. Hopefully once the structural formula is determined, the toxic portion of the molecule might be separated from the oncolytic moiety.

New cancer drugs are collected and synthesized by drug manufacturers and the National Cancer Institute at the rate of 40,000 compounds per year including antibiotic filtrates. These agents are screened by tissue culture methods and are often incidentally tested for inhibiting effects on bacteria. The standard animal screens for new agents consist of three mouse tumors: a mouse sarcoma called S-180 which occurs both in solid tumor and ascites form, a carcinoma which is known as the Walker 256 tumor, and a mouse leukemia known as L-1210. There are many other specialized animal tumor screens including both spontaneous and transplanted tumors. If a new agent shows promise in the early screens they are more widely tested in animals, including the increasing use of monkeys. The basic difficulty with these screens is that agents which appear promising in animals may have no effect on tumors in human beings. On the other hand, the agent Myleran which is one of the most effective cancer chemotherapy drugs is almost devoid of activity in the standard tumor screens.

It is the purpose of this article to describe the current use of chemotherapeutic agents in human beings. Drugs are discussed according to pharmacologic classification and listed in table 1 under various types of cancer.

## ALKYLATING AGENTS

*Nitrogen Mustard*—In 1942 the first patient to receive nitrogen mustard was treated for a terminal state of malignant lymphoma characterized by fever and wasting. Since sulfur mustard had been such an effective agent in World War I, in the years between the great wars both German and French chemists independently synthesized various nitrogen mustards for chemical warfare. Toxicity studies revealed destruction of lymphoid tissue in experimental animals which prompted Gilman, Goodman and Dougherty to study the effect of nitrogen mustard on transplanted lymphosarcoma in mice and eventually in the first human being. The first patient presented all of the classic findings in the treatment of lymphoma with an alkylating agent. There was the cessation of fever, remission of the disease, inadvertent over-dosage with severe but reversible depression of the bone marrow. Subsequent courses of treatment proved to be less effective. The term alkylating agent[4] is derived from the word "alkyl," meaning a straight-chain compound. If the alkylating agent is classed as "polyfunctional" it may have two active groups and link two compounds together. When the highly active solution of nitrogen mustard is given intravenously it reacts with the most active chemical groups of many substances throughout the entire body and causes a considerable degree of indiscriminate damage to body chemistry.

Many theories have been advanced as to the method of action of these agents, one of the more interesting being that alkylating agents cause breaks along the chain of the double helices of DNA in nucleoprotein of the nucleus of cells in a manner similar to the indiscriminate ionization and molecular disruption produced by radiotherapy. Both radiotherapy and chemotherapy are utilized with the hypothesis that the cancer cells are selectively more sensitive to the molecular disruption and ionization than are normal cells. Since alkylating agents may act similarly to ionizing radiation they have been termed "radiomimetic." Alkylating agents, like irradiation, are also "mutagenic" in that mutations can be caused by derangement of the structure of genes.

Radiotherapy has the advantage over systemic chemotherapy in that its effect can be localized to a particular body area. Limiting the circulation of a chemotherapeutic agent to one body region by infusion or perfusion has proved difficult, particularly for tumors of the trunk. For this reason palliative radiotherapy and regional neurolysis for locally symptomatic cancer are still superior in many instances to regional chemotherapy for the relief of pain. Systemic administration of chemical agents is reserved for generalized tumors. The effects of total body irradiation by means of teletherapy or phosphorus 32 may be similar to that of a systemically administered alkylating agent.

*Triethylene Melamine*—Related to nitrogen mustard is the alkylating agent TEM, or triethylene melamine, which can be taken orally. Newer agents having more predictable rates of absorption, such as chlorambucil, are replacing this drug.

*Chlorambucil*—Chlorambucil (Leukeran) is the chemical agent most frequently used for chronic lymphoid leukemia and probably the agent of choice in carcinoma of the ovary.[10]

*Melphalan*—Attempts have been made to attach the mustard structure to a metabolite which

## TABLE 1

## HUMAN CANCERS AND SUGGESTED CHEMOTHERAPEUTIC AGENTS

| *Tumor* |  | *Agent* |  |
|---|---|---|---|
|  | 1st choice | 2d choice | 3d choice |
| Breast, adenocarcinoma |  |  |  |
| Premenopausal, after castration | Androgen | Corticoids |  |
| Postmenopausal | Stilbestrol | Androgen | Corticoids |
| Steroid resistant | Triethylenethiophosphoramide | Vinblastine |  |
| Melanoma | Triethylenethiophosphoramide | Vinblastine |  |
| Sarcoma | Alkylating agents | Vinblastine |  |
| Lung, epidermoid (best response in oat cell) | Nitrogen mustard | (Actinomycin D) with x-ray |  |
| Leukemia, acute: |  |  |  |
| Children | Amethopterin | Corticoids | 6-mercaptopurine |
| Adults | 6-mercaptopurine | Amethopterin | High-dose corticoid |
| Leukemia, chronic: |  |  |  |
| Lymphatic | Chlorambucil | Corticoids | 6-mercaptopurine |
| Myeloid | Busulfan | 6-mercaptopurine | (Demecolcine) |
| Hodgkin's disease, acute: | Nitrogen mustard | Corticoids | Vinblastine |
| Lymphosarcoma | Nitrogen mustard | Corticoids | Vinblastine |
| Myeloma | (1-phenylalanine mustard) | Corticoids | Cyclophosphamide |
| Colon, adenocarcinoma | 5-fluorouracil | Triethylenethiophosphoramide |  |
| Stomach, adenocarcinoma | 5-fluorouracil | (Actinomycin D) with x-ray |  |
| Liver, primary | 5-fluorouracil |  |  |
| Ovary | Chlorambucil | Vinblastine |  |
| Cervix, epidermoid | Nitrogen mustard | 5-fluorouracil |  |
| Prostate | Stilbestrol | Corticoids |  |
| Choriocarcinoma | Amethopterin | Vinblastine | Nitrogen mustard |
| Endometrium, adenocarcinoma | Norethynodrel | Vinblastine |  |
| Wilms' tumor | (Actinomycin D) with x-ray |  |  |
| Testis | Nitrogen mustard | Combinations |  |
| Adrenal cortex | (O,p' DDD) |  |  |
| Malignant effusions | Diuretics—chlorothiazide, spironolactone | Intracavitary triethylenethiophosphoramide |  |

( ) = new drug: limited by federal law to investigational use.

| *Generic Name* | *Trade Name* |
|---|---|
| amethopterin | Methotrexate, Lederle |
| (demecolcine) | (Colcemide), Ciba |
| triethylenethiophosphoramide | Thio-Tepa, Lederle |
| (actinomycin D) | (Meractinomycin), Merck, Sharp & Dohme |
| cyclophosphamide | Cytoxan, Mead Johnson |
| (1-phenylalanine mustard) (melphalan) | (Alkeran), Burroughs Wellcome |
| norethynodrel with ethynylestradiol 3-methyl ether | Enovid, Searle |
| chlorothiazide | Diuril, Merck, Sharp & Dohme |
| spironolactone | Aldactone, Serle |
| nitrogen mustard-mechlorethamine | Mustargen, Merck, Sharp & Dohme |
| chlorambucil | Leukeran, Burroughs Wellcome |
| busulfan | Myleran, Burroughs Wellcome |
| 5-fluorouracil | Fluorouracil, Roche |

would guide the alkylating molecule into the enzyme system or cellular site to obtain a more specific action. Phenylalanine mustard is this type of agent. It was hoped that the phenylalanine, an essential precursor of melanin, would be incorporated by the malignant melanoma in its production of melanin pigment and that the attached alkylating radical would destroy the tumor. However, the drug's effect on melanomas has been disappointing. The racemic mixture is known as sarcolysin and the pure levo-isomer is known by the generic name melphalan. Clinical trials are showing melphalan to be of benefit in approximately 30 per cent of myeloma patients.

*Cyclophosphamide*—Cyclophosphamide (Cytoxan), was developed in an attempt to localize the effect of an alkylating agent to a cancer and to spare the megakaryocytes. Since the level of the enzyme phosphoramidase is low in megakaryocytes and high in tumors, an alkylating agent with a phosphoramide group might be expected to release its active alkylating structure in tumor cells to a much greater extent than in megakaryocytes, producing a platelet sparing effect. Successfully the drug is less depressing to platelet counts and can be given orally, intramuscularly, intrapleurally and intravenously without fear of local tissue necrosis. Cytoxan is an alkylating agent which can be considered for use in acute leukemia.[11] The complication of alopecia is a problem.

*Myleran*—Myleran is an alkylating agent of entirely different chemical structure and is now the drug of choice in the treatment of chronic myeloid leukemia. Long remissions are difficult to obtain with this agent and it appears that the preferred treatment of chronic myeloid leukemia continues to be radiotherapy to the spleen. Roentgentherapy better controls the spleen size, the manifestations of hypersplenism and the pain of small splenic infarctions.

### Anti-Metabolites

Anti-metabolite therapy is predicated on the principal of furnishing an essential enzyme system of tumor cells with a counterfeit substrate intended to produce cell death by obstructing the functions of the essential enzymes.

Azaserine and DON (6-diazo-5-oxo-L-norleucine) are drugs having molecular structure similar to glutamine and are used to block the incorporation of glutamine into nucleoprotein.[7] The glutamine antagonists were nearly as toxic to normal tissues as they were to tumors and have been largely discarded. These two drugs can also be classed as antibiotics since they are products of streptomyces.

Since some of the better chemotherapy agents are in the anti-metabolite category, it is baffling to consider that the use of metabolites themselves may be accompanied by patient improvement in some malignancies and by aggravation of disease in others. The moderately good results seen in the administration of vitamin B-12 to children with neuroblastoma has been attributed to the possibility that the tumor overgrowth might be partly due to a lack of this maturation factor. On the other hand, the administration of the B vitamin folic acid in its active form of folinic acid to patients with acute leukemia causes acute exacerbation of the symptoms.

*Anti-Folic Acid Compounds*—Folic acid antimetabolites were introduced by Farber[6] in 1948 when he reported clinical and hematologic remission in five patients with acute leukemia who were treated with aminopterin, an analogue of folic acid. This drug has now been replaced by amethopterin (Methotrexate) which affords some palliation of acute leukemia in children and is capable of producing five year survivals in otherwise lethal choriocarcinoma. Methotrexate has also been used as a regional perfusion agent.

*Anti-Purines*—The most used anti-purine agent, 6-mercaptopurine, was designed to block the synthesis of nucleic acids in the malignant cell. This compound is now beneficial in the treatment of acute leukemia in adults, and is used in combination therapy with other agents to prevent the emergence of resistant strains of tumor cells.

*Pyrimidine Antagonists*—Since uracil is the chief precursor of pyrimidine found in RNA and of thymidine found in DNA, attempts have been made to interfere with pyrimidine metabolism by altering the uracil molecule. Halogenation of uracil with fluorine produced 5-fluorouracil. The therapeutic index of 5-FU approaches unity implying that an effective tumor dose is also a near fatal dose. At present, 5-FU appears most effective for adenocarcinoma of the gastrointestinal tract and primary carcinoma of the liver. In order to be considered for fluorouracil therapy, a prospective patient must fulfill all the following criteria:

1. Good nutritional state without protein loss.
2. No major surgical procedure within 30 days.
3. No history of high-dose pelvic irradiation.
4. No previous use of alkylating agents.
5. Adequate bone marrow function according to commonly accepted standards, e.g., white cell

count of 5,000 or over and platelets 100,000 or more.

6. Adequate liver and renal functions.
7. Absence of infection.

A search for less toxic but equally effective pyrimidine analogues is in progress. The anti-metabolite 5-FU is also used in perfusion therapy.

### Regional Chemotherapy

The toxic effects of the systemic use of the chemotherapeutic agents described often curtail treatment before an optimum therapeutic response has been achieved. Several methods have been devised to localize the drug to a smaller portion of the body. Direct injection of the tumor with agents, particularly the alkylating agent Thio-TEPA, has occasionally been of benefit.

*Malignant Effusions*—Alkylating agents can also be used to control malignant effusions which are uncontrollable by means of diuretics. Thio-TEPA appears to be free of painful local irritation to the serosal surfaces. The treatment method consists of the removal of the fluid followed by the instillation of 30 mg. (two ampules) of Thio-TEPA into the chest cavity or peritoneal space, or one half of this amount into the pericardium. This procedure can be repeated at intervals of six weeks and if it is not effective after three instillations the method is abandoned. Nitrogen mustard can be used in this manner in a dose of 0.4 mg. per kilogram, but is often accompanied by vomiting when instilled into the pleural space and when instilled into the peritoneum a chemical peritonitis may result with vomiting and abdominal tenderness.

*Perfusion Therapy*—Since a high dose of an anti-tumor drug is theoretically more effective than a lower dose, perfusion technics have been developed to expose tumor cells to more lethal concentrations of drugs. Anti-metabolites have also been used in perfusion treatment. Perfusion has been effective for melanomas of the extremities when the same agent was ineffective by systemic administration. However, high doses of an alkylating agent per se may not prevent the emergence of resistant cell lines. The avoidance of systemic toxicity has only been accomplished in perfusion of limb circulation. Perfused drugs leak excessively into the systemic circulation when pelvic and abdominal organs are perfused. Antidotes to alkylating agents or anti-metabolites may escape from the systemic circulation into the perfused circuit thereby nullifying the high drug concentration. Perfusion technics remain in the experimental stage.

### Hormones

Hormonal therapy for cancer involves withdrawal of hormones from dependent tumors, and the use of hormones for suppression of growth in other tumors. Hormones may be used to suppress endocrine glands secondarily depriving hormonal dependent tumors. Endocrine gland ablation by surgery or radiotherapy may produce the same effect directly.

The human tumors showing clinically significant benefit from the addition or deprivation of hormones are breast, prostate, thyroid, endometrium, lymphomas and leukemias.

*Breast*—In the premenopausal age group, the administration of androgen may be followed by a beneficial response, partcularly if the tumor has regressed following oophorectomy. The administration of estrogens to late postmenopausal women with persistent carcinoma of the breast is of benefit in approximately one half of the cases; stilbestrol is economical and the average dose is 15 mg. daily. Breast cancer which has responded to such alteration of the hormonal environment may show an additional remission by ablative procedures such as adrenalectomy or hypophysectomy.

*Prostate*—Since most carcinoma of the prostate is dependent upon male hormone, it usually responds to estrogens; the drug of choice is stilbestrol in a dose of 15 mg. per day. On relapse, castration is usually of benefit.

*Thyroid*—Regression of metastatic differentiated thyroid cancer may be obtained by the administration of thyroid hormone in the maximum tolerated dose.[3] Response is more often seen in young patients with papillary or follicular carcinoma.

*Adrenal Steroids*—An adrenal cortical steroid derivative such as prednisolone may be used to inhibit pituitary trophic hormones and by this route suppress adrenal production of sex steroids; this has been called a medical adrenalectomy. In similar fashion, prednisolone may inhibit pituitary gonadotropins and suppress gonadal function thus benefiting the late stages of sex hormone dependent tumors. Adrenal steroids may also cause improved appetite, a sense of well being, an antipyretic effect, and the acquired hemolytic anemia associated with chronic leukemias and lymphomas may be alleviated. The adrenal steroids also act as myeloid hemopoietic stimulants increasing neutrophils, platelets and the erythrocytes. There is also a direct lympholytic action of the adrenal steroids on lymphomas and lymphoid leukemias.

*Endometrium*—Progesterone may suppress metastatic carcinoma of the endometrium and the newer synthetic progesterone agents such as Enovid are likewise effective. Enovid dosage may be 30 mg. per day or higher.

### ANTIBIOTICS

More than 25 anti-tumor antibiotics have reached human clinical trial and of these only a few have been worthy of continued use. Azaserine and DON have been mentioned before and these two antibiotic products of micro-organisms also fit into the category of glutamine antagonists. Of the actinomycin group, actinomycin D produces regression of some Wilm's tumors in children. It may increase the sensitivity of some tumors to radiotherapy. D'Angio[5] discovered the radiation synergistic properties when he noted that actinomycin D caused a recurrence of radiodermatitis in areas previously irradiated when the antibiotic was given as late as a year after the last course of roentgentherapy. Actinomycin D has been given systemically during irradiation of bronchogenic carcinoma.

Mitomycin C, developed by Japanese investigators from streptomyces filtrates, has been effective against many tumors, but it is accompanied by severe widespread toxic effects. These are degeneration of the gastrointestinal mucosa, bone marrow depression and alopecia. Streptovitacin A is another agent which recently has shown moderate promise. A new antibiotic, Pactamycin, is in clinical trial by the Midwest Cooperative Chemotherapy Group. This drug is of interest to investigators because of its ability to suppress human tumors transplanted to hamsters, particularly choriocarcinoma and amelanotic melanoma. The 58 per cent inhibition of human melanoma in these experimental animals may offer some ray of hope to victims of this devastating neoplasm.

### MISCELLANEOUS AGENTS

*Demecolcine*—Colchicine has been known since 1908 to have anti-mitotic activity. A derivative known as demecolcine has been used with success in chronic myeloid leukemia. During treatment there is often a precipitous fall in the peripheral neutrophil count and this agent may be of value in cases resistant to standard methods of treatment.

*Vinblastine*—Vinblastine (Velban) is an alkyloid derivative of the common periwinkle and the newest addition to chemical armamentarium. It is available only in 10 mg. vials. An oral form has been abandoned because of successful treatment of cases by the intravenous route following failures by the oral route. When released by the F.D.A. in February 1961, it was indicated in Hodgkin's disease resistant to both alkylating agents and radiotherapy. Its ani-tumor spectrum has recently been widened. It is effective in approximately one half of the patients with acute stem cell leukemia, chronic myeloid leukemia, lymphosarcoma, choriocarcinoma and metastatic carcinoma of the breast. Possibly two thirds of carcinoma of the ovary and three fourths of the cases of endometrial carcinoma show objective improvement. These figures are preliminary and based on only 300 cases.

### DRUG RESISTANCE

The problem of drug resistance is being scrutinized. Tissue culture studies are giving evidence that drug resistance is equivalent to the development by a tumor of a new metabolic route when one pathway is blocked. It is becoming increasingly apparent that most, if not all, anti-cancer drugs act as irreversible enzyme inhibitors. The recent interest in combining several agents is an attempt to block simultaneously all of several independent pathways which cancer cells may have for the synthesis of essential metabolites. The rate and site of inactivation of a chemotherapeutic agent may also be a determining factor in obtaining an effective concentration in the tumor cell.

In the choice of a chemotherapy agent for a given tumor, one has only certain statistical chances and these figures may have been derived from unreliable sources or from poorly designed clinical trials. We are in the somewhat discouraging situation in that we cannot make accurate predictions about the effectiveness of a given drug in a single individual or of the duration of a remission if one is obtained. We can be certain that if a favorable response appears there will eventually develop a fatal state of refractoriness to the drug and this is often accompanied by harassing toxic effects.

### CANCER CHEMOTHERAPY NATIONAL SERVICE CENTER

Regardless of how promising an agent may appear in laboratory animals, a great step must be made when the agents are tried in human beings. The Cancer Chemotherapy National Service is a division of the National Cancer Institute of the National Institutes of Health, which is a division of the Department of Health, Education and Welfare. The CCNSC was conceived in 1953 when the National Cancer Institute was requested to direct an extra-mural research program in chemotherapy of patients with acute leukemia. In 1954 the National Advisory Cancer Council, which included representatives of the Damon Runyon Memorial Fund, and the American Cancer Society joined to lay preliminary plans for what is now the CCNSC. It has a staff of chemists, biologists, clinicians, pharmacologists, endocrinologists, statisticians and administrative personnel whose functions are to plan, initiate and supervise cancer therapy. It has five advisory panels, those in chemistry, screening, drug evaluation, endocrinology and clinical studies. Members of these include leaders in the field of cancer.

It became apparent that clinical studies must necessarily be done in large numbers of patients with uniform protocols in order to obtain statistically significant results. Cooperative Chemotherapy Groups consist of physician investigators and allied scientists divided regionally and by particular interests. Some of the groups are named the Acute Leukemia Group—Children, Acute Leukemia Group—All Ages, Eastern, Western, Midwest Group—Solid Tumor, Cervix Group, various University Surgical Adjuvant Groups. The Ellis Fischel State Cancer Hospital is a member of the Midwest Cooperative Chemotherapy Group with these institutions: Hospitals —Henry Ford, Cook County, Presbyterian-St. Luke's, Cleveland Clinic and six veterans hospitals; Universities in the group include Iowa, Wayne State, Cincinnati, Marquette, Michigan, Indiana, Illinois and Ohio State. Membership in this group affords access to the newer chemotherapeutic agents and allows participation in new developments in chemotherapy. The patients at Ellis Fischel State Cancer Hospital who are candidates for chemotherapy are given a chemical agent believed to be of potential benefit when the bed or the out-patient facilities are available. When the standard agent offers little hope, when toxicity is a problem, when the tumor has become resistant, a newer agent is used when it appears promising. The standard battery of laboratory tests during chemotherapy consists of hemoglobin and hematocrit, reticulocyte and platelet count, total and differential white count, urinalysis, blood urea nitrogen, blood uric acid, serum glutamic-pyruvic transaminase and alkaline phosphatase.

In summary, cancer chemotherapy is a rapidly expanding, quickly changing, complicated field of therapeutics with many drugs of limited efficacy and great potential toxicity available. Most chemotherapy is empirical. Mass screening of new agents has been a slow process. Basic research must find qualitative biochemical differences between cancer cells and normal cells in order that more specific, less toxic drugs may be designed. Patients with persistent cancer may be divided into three categories: those with slowly progressing asymptomatic tumors who may not need palliation; those with progressive disease for whom a potentially effective agent is available; and third, those whose rapid deterioration may be aggravated by drug toxicity. The latter group may benefit more from potent tranquilizers and analgesics.

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# Adenocarcinoma of the Cervix Uteri

## *Report of 104 Cases*

THIS PAPER reports the experience with 104 cases of adenocarcinoma of the cervix uteri treated at the Ellis Fischel State Cancer Hospital from 1940 to 1960. Since this variant of cervical cancer is relatively infrequent, divergent opinions concerning relative malignancy and methods of treatment have accumulated in the literature. Few series as large as the one described here have been reported to help resolve these questions and most of them were made more than 10 years ago (table 1).

Among studies not included in table 1 because of disparate methods of reporting results, Hepler has reported the largest series[7] with 164 cases. One hundred and twenty-nine of the 164 received irradiation, with an absolute five year survival of 37.4 per cent (46 of 123). Surgery was used only in highly select cases—35 of 164—with an absolute five year survival of 51.5 per cent (17 of 33). The exact criteria for selection of patients for operation were not stated and no statistical analysis of these two groups was made.

Fletcher reported that 85 per cent of 27 patients treated with supervoltage survived five years and attributed the high percentage to the large number in the series who had hysterectomy and lymphadenectomy combined with irradiation.[5] His results were not divided into League of Nations stages.

**Experience in the treatment of 104 adenocarcinomas of the cervix uteri at the Ellis Fischel State Cancer Hospital between 1940 and 1960 is reported with discussion of the methods of treatment.**

**Dr. Sala is Chief of Radiotherapy and Dr. Spratt is Chief Surgeon, Ellis Fischel State Cancer Hospital, Columbia. Dr. Gleason was Assistant Resident in Surgery and Radiotherapy at the Hospital from July 1961 to December 1961.**

TABLE 1

ADENOCARCINOMA OF THE CERVIX, ABSOLUTE FIVE YEAR SURVIVAL REPORTED BY DIFFERENT AUTHORS

| | | *Five Year Survival by League of Nations Staging* | | | | |
|---|---|---|---|---|---|---|
| *Physician Reporting* | *No. of Cases* | STAGE I PER CENT | STAGE II PER CENT | STAGE III PER CENT | STAGE IV PER CENT | ALL CASES PER CENT |
| | | | (Combined) | | | |
| Ward | 22 | 5/7—71 | 3/12—25 | | 0/3— 0 | 8/22—36 |
| Nilson | 26 | 2/5—40 | 2/9—22 | 1/4—25 | 0/8— 0 | 5/26—19 |
| Truelson | 124 | 54 | 34 | 20 | 13 | 28 |
| Baker | 30 | 5/7—71 | 2/13—15 | 1/8—13 | 0/2— 0 | 8/30—27 |
| | | | | (Combined) | | |
| Tremblay | 46 | 11/21—52 | 4/11—36 | 1/14—7 | | 16/46—35 |
| Sala* | 46 | 9/11—82 | 5/15—33 | 3/12—25 | 1/8—12 | 18/46—39 |

* Ellis Fischel State Cancer Hospital patients at risk five or more years for determination of absolute five year survival rates.

TABLE 2

ABSOLUTE FIVE YEAR SURVIVAL FOR 950 PATIENTS HAVING CARCINOMA OF THE CERVIX TREATED PRIMARILY AT ELLIS FISCHEL STATE CANCER HOSPITAL FROM 1940-1955

| | *Epidermoid Carcinomas* | | | *Adenocarcinomas* | | |
|---|---|---|---|---|---|---|
| | | LIVING FREE OF DISEASE AFTER FIVE YEARS | | | LIVING FREE OF DISEASE AFTER FIVE YEARS | |
| *League of Nation Stage* | NUMBER TREATED | Number | Per Cent | NUMBER TREATED | Number | Per Cent |
| I | 144 | 96 | 67 | 11 | 9 | 82 |
| II | 283 | 118 | 42 | 15 | 5 | 33 |
| III | 277 | 88 | 31 | 12 | 3 | 25 |
| IV | 200 | 23 | 11 | 8 | 1 | 12 |
| Total | 904 | 325 | 36 | 46 | 18 | 39 |

$H_0$ 1) The distribution of the number of patients with epidermoid carcinomas and adenocarcinomas of the cervix uteri is the same among the four League of Nation stages.
Accept with $P>.5, <.7$
$H_0$ 2) The distribution of the number of patients surviving five years after treatment of either type of cervical cancer is the same among the four League of Nation stages.
Accept with $P>.2, <.3$

Gusberg and Corscaden[6] found no evidence of different radiosensitivity between squamous cell and adenocarcinoma of the cervix uteri. In this institution, comparison of the absolute survival, free of disease, of a series of epidermoid carcinomas and epidermoid carcinomas of the cervix uteri (Table 2) showed no significant difference in the five year survival of patients having the two histologic variants.

TABLE 3

DISTRIBUTION OF ADENOCARCINOMA OF THE CERVIX WITH MEAN PATIENT AGE FOR EACH STAGE

| | *Adenocarcinomas* | |
|---|---|---|
| *League of Nations Stage* | NO. OF CASES | MEAN AGE (YRS.) |
| I | 17 | 44.0 |
| II | 18 | 52.3 |
| III | 29 | 56.2 |
| IV | 10 | 58.8 |
| Postoperative Persistence | 12 | 48.2 |
| Postirradiation Persistence | 18 | 52.2 |
| Total | 104 | 50.5 |

Age range of all 104 patients, 24 to 79 years with a median age of 50 years.

## Material

By definition, adenocarcinomas of the cervix arise within the cervical mucosa or its glands and may be situated anywhere between the internal and external os.[8] The 104 adenocarcinomas were detected among 1,784 cervical carcinomas of all histologic types (5.8 per cent). All patients were indigent residents of Missouri. The histologic diagnoses were made by Drs. R. E. Johnson, L. V. Ackerman and T. van Ravenswaay. No patient was lost to follow-up. Patients with persistent carcinoma, or dead of intercurrent disease, are counted as dead of cancer. Seventy-four patients received their initial therapy at Ellis Fischel State Cancer Hospital (table 4). Thirty patients had received therapy for their cervical cancer before admission to the Ellis Fischel State Cancer Hospital. Twenty-nine of these had proved persistent cancer at the time of admission and one was admitted to tumor clinic follow-up free of disease. League of Nations staging, age, symptoms, method of treatment and survival data are shown in tables 2 to 8. One patient in this series had precancerous adenomatous hyperplasia discovered by cervical conization. Eight years later, an adenocarcinoma of the cervix was found. Another case may have arisen from a Wolffian duct.

## Method of Treatment

The therapeutic modalities employed and the results obtained for the 74 patients treated initially at Ellis Fischel State Cancer Hospital are shown in table 4 and 6, and for the 29 patients first treated here for post-therapeutic persistent cancer in table 5.

During the last 10 years, we have modified the

TABLE 4

DIFFERENT THERAPEUTIC MODALITIES USED IN 74 PATIENTS HAVING FIRST THERAPY AT ELLIS FISCHEL STATE CANCER HOSPITAL

| *Period Treated Years, Incl.* | *Source of Irradiation* | | | *No. of Cases* |
|---|---|---|---|---|
| | EXTERNAL | VAGINAL | UTERINE | |
| 1940-42 | 218 Kv | Radium tubes in gauze | Radium Tandem | 9 |
| 1943-50 | 250 Kv | 140 Kv transvaginal | | 23 |
| 1951-54 | 250 Kv | 140 Kv transvaginal | Radium Tandem | 8 |
| 1955-57 | 250 Kv | Silverstone Colpostat | Radium Tandem | 15 |
| 1957-on | CO 60 | | | 7* |
| 1957-59 | CO 60 | 140 Kv transvaginal | | 5 |
| 1959-on | CO 60 | 140 Kv transvaginal | Radium Tandem | 3 |
| 1958-59 | None | Silverstone Colpostat | Radium Tandem | 4** |
| | | | Total | 74 |

* Palliative, for very advanced cases.
** Stage I curietherapy followed in six weeks by total hysterectomy.

treatment of carcinomas of the cervix with every 200 cases, introducing a new element in each new series of 200. As shown in table 6, in 1951-1954, we added an intrauterine radium tandem, delivering 3,600 mg. hours (3 × 10 × 120 hours) to the external and transvaginal radio therapy used in 1943-1950. In the next series (1955-1957), a Silverstone Colpostat with 2 × 25 mg. × 80 hrs. (4,000 mg. hours) was used instead of Regato's transvaginal speculum. In 1957, we substituted telecobalt therapy—4,000 to 5,000 rads midpelvis dose—for external radiotherapy of 250 Kv. The small number of patients with adenocarcinoma of the cervix precludes statistical analysis of the relative biological effects of the different methods of treatment.

In 1958-1959, regardless of the histology of the tumor, Stage I carcinomas of the cervix were treated by intracavitary radium—Silverstone Colpostat and intrauterine tandem, 7,000 to 8,000 mg. hours—followed in six weeks by abdominal total hysterectomy. The four patients having adenocarcinomas of the cervix uteri in this series died of cancer within the first three years of follow-up. This poor result confirms Corscaden's prognostication:[4]

"I conclude . . . that the treatment of adenocarcinoma of the cervix is the same as the treatment of squamous carcinoma. If operation is decided upon, *it must be radical* (italics ours). Because of the excellent results which follow simple hysterectomy for adenocarcinoma of the corpus uteri, there is often a tendency to treat adenocarcinoma of the cervix in the same way. *This will be followed by a poor result*" (italics ours).

## Results

Table 6 shows accumulative survival data for patients treated primarily at Ellis Fischel State Cancer Hospital in two successive decades under the direction of two different radiotherapists, with supervoltage (Cobalt 60) available only during the second decade. The number of advanced stage tumors treated was significantly greater in the second decade (probability of similar number of cancer of various stages in each decade, $<0.01$) although the League of Nations requirements for the staging became more stringent in 1950.[1] A trend, not yet statistically significant, is seen in the second 10 years toward improvement in the accumulative five year survival for patients having Stage II, III and IV adenocarcinomas of the cervix. Results

TABLE 5

METHOD OF TREATMENT EMPLOYED PRIMARILY AT ELLIS FISCHEL STATE CANCER HOSPITAL ON PATIENTS FIRST ADMITTED WITH POST-THERAPEUTIC PERSISTENT ADENOCARCINOMA OF CERVIX

| *Previous Treatment* | *Decade* | *Treatment Employed at Ellis Fischel State Cancer Hospital* | *No. of Patients* | *Results* |
|---|---|---|---|---|
| Cervicectomy | 1940-1950 | Colpostat—218 Kv | 1 | Dead within 1 year |
| | 1950-1960 | Cobalt-60 | 1 | Dead within 2 years |
| Subtotal Hysterectomy* | 1940-1950 | Colpostat—250 Kv | 2 | Dead within 1 year |
| | 1950-1960 | Transvaginal—140 Kv<br>External—250 Kv | 4 | 3 dead within 1 year<br>1 dead within 2 years |
| Total Hysterectomy | 1940-1950 | | 0 | |
| | 1950-1960 | External 250 Kv and pelvic exenteration | 1 | Dead within 1 year |
| | | Grid 250 Kv | 1 | Dead within 3 years |
| | | Colostomy only | 1 | Dead within 1 year |
| | | Transvaginal 140 Kv and surgical excision of an implant on sigmoid colon | 1 | Alive & free of disease —6 years |
| Radiotherapy | 1940-1950 | 240 Kv | 2 | Dead within 2 years |
| | | Terminal when first seen, no treatment | 2 | Dead within 1 year |
| | 1950-1960 | Pelvic exenteration | 3 | 1 alive & free of disease —5 years<br>2 dead within 2 years |
| | | Explored for pelvic exenteration but found inoperable because of periaortic lymph node metastasis | 1 | Dead within 1 year |
| | | Panhysterectomy | 1 | Alive & well—3 years |
| | | External 250 Kv and panhysterectomy | 1 | Dead within 2 years |
| | | External 250 Kv | 2 | Dead within 1 year |
| | | Completion of full course of radiotherapy started elsewhere; 250 Kv, colpostat, transvaginal 140 Kv | 1 | Alive & free of disease —5 years |
| | | Chordotomy only | 1 | Dead within 1 year |
| | | No treatment—terminal when first seen | 3 | Dead within 1 year |
| | | No treatment—no cancer** | 1 | Alive & free of disease —2 years |
| | | Total | 30 | |

* All subtotal hysterectomies had been performed within three years before admission to Ellis Fischel State Cancer Hospital.

** One patient was admitted to the Ellis Fischel State Cancer Hospital clinic for follow-up only following previous radiotherapy.

for Stage I could not follow a parallel trend of betterment because the four patients receiving intracavitary curietherapy followed by total hysterectomy died within the first three years of follow-up. All seven patients having Stage I cancers treated by radiotherapy alone are living and free of recurrent cancer.

Some persistent carcinomas of the cervix uteri can be controlled after the failure of all other therapeutic modalities by the surgical exenteration of all pelvic organs.[3] Among the 104 patients seen, 64 have developed locally persistent or metastatic cancer. Review of the records permitted retrospective evaluation of 57 of these 64 for pelvic exenteration. Table 7 shows the reasons why most of these patients were inoperable when persistent cancer became evident. Forty-three (75 per cent) of these patients were not

TABLE 6

ACCUMULATIVE FIVE YEAR SURVIVAL RATE FOR 74 PATIENTS HAVING PRIMARY TREATMENT AT ELLIS FISCHEL STATE CANCER HOSPITAL IN TWO CONSECUTIVE DECADES

| | 1940-1950 | | | 1950-1960 | | |
|---|---|---|---|---|---|---|
| *League of Nations Stage* | *Number of Patients Treated* | *Free of Disease After Five Years* | *Accumulative Five Year Survival* PER CENT | *Number of Patients Treated* | *Free of Disease After or Within Five Years* | *Accumulative Five Year Survival* PER CENT |
| I | 6 | 4 | 67 | 11 | 7 | 63* |
| II | 11 | 4 | 36 | 7 | 3 | 43 |
| III | 4 | 1 | 25 | 25 | 11 | 40 |
| IV | 4 | 0 | 0 | 6 | 1 | 16 |
| Total | 25 | 9 | 36 | 49 | 22** | 45 |

* The only four patients dying of cancer following treatment of the Stage I cancers in the second decade were treated in 1958-1959 with radium therapy followed by total hysterectomy. The accumulative 5-year survival for the seven patients treated by radiotherapy alone is 100 per cent.

** Seven living patients are free of disease over two years after therapy but have not been at risk for five years; by the life table method of determining accumulative survival these cases can be included with preservation of statistical accuracy.

TABLE 7

FACTORS DETERMINING THE OPERABILITY OF POST-IRRADIATION PELVIC PERSISTENCE

| *Reason Inoperable* | *No. of Pts.* |
|---|---|
| Extrapelvic metastases | 30 |
| Frozen pelvis | 9 |
| Sacral plexus invasion | 2 |
| Swelling of legs | 2 |
| Total | 43 |
| *Status of Operable Cases* | |
| Probably operable by present standards, all dead of cancer | 6 |
| *Pelvic Exenterations Performed* | |
| Alive and free of disease 2, 7 and 8 years postoperative | 3 |
| Died of persistent cancer 8 and 17 months postoperative | 2 |
| Died during postoperative period | 2 |
| Total | 7 |
| Pelvic exenteration candidate, pelvic persistence controlled by additional radiotherapy for 2 years | 1 |
| TOTAL | 57 |

candidates for pelvic exenteration because of extrapelvic metastases and inoperable regional disease (tables 7, 8). By review of the records, six additional patients might have been candidates for pelvic exenteration. One of these declined the operation. This radical procedure was carried out only seven times among 104 patients, with the apparent salvage of three persons. In all, no less than 12 per cent of all cases seen and no less than 20 per cent of cases developing persistent or metastatic cancer will require evaluation for pelvic exenteration after the failure of all other therapeutic modalities. In three of seven (42.8 per cent) cases, this operation controlled adenocarcinomas of the cervix uteri persistent in the pelvis after radiotherapy. These ob-

TABLE 8

LOCATION OF PROVED EXTRAPELVIC METATASES IN THIRTY PATIENTS

| *Anatomical Location* | *Number of Times Anatomical Site Contained Metastases* ADENOCARCINOMA |
|---|---|
| Lung | 5 |
| Bone | 2 |
| Skin | 1 |
| Umbilicus | 1 |
| Liver | 3 |
| Peritoneum | 16 |
| Intestines | 1 |
| Lymph Nodes: | |
| Periaortic | 2 |
| Inguinal | 2 |
| Axillary | 2 |
| Supraclavicular | 1 |

servations emphasize the importance of close follow-up with pelvic examinations for many years.

Permanent control of post-irradiation persistence by re-irradiation was attempted only once among the 74 patients treated primarily at Ellis Fischel, the patient is still free of disease two years after the second course of therapy. A second course of radiotherapy at Ellis Fischel following a definitive course of radiotherapy at other institutions failed to control the cancer in all five cases retreated. Temporary control by a second course of irradiation to localized recurrences should be attempted in inoperable patients, providing that the risk of tissue necrosis from the additional irradiation is minimal.

## DISCUSSION

Irradiation is equally effective in the treatment of adenocarcinomas and epidermoid carcinomas of the cervix uteri. However, retreatment of pelvic recurrences of adenocarcinoma is seldom successful and involves the risk of serious complications. The better result achieved in the treatment of Stage I cancers is obvious, but we are disturbed by the observation that significantly larger numbers of advanced stage cancers were seen at Ellis Fischel between 1950 and 1960 than in the previous decade. Also, no patients were seen during the first 10 years with persistence after total hysterectomy, although four such patients were seen in the second 10 years (table 5). This same trend is quite evident among the epidermoid carcinomas of the cervix seen at Ellis Fischel State Cancer Hospital and suggests that some cervical cancers were being treated primarily by surgery before admission to the Cancer Hospital. The 1958-1959 experience at Ellis Fischel State Cancer Hospital with the treatment of four Stage I adenocarcinomas of the cervix by intracavitary curietherapy (Colpostat and tandem) followed by total hysterectomy was unsuccessful, confirming Corscaden's warning.[4]

The efficiency of our follow-up system has made it possible for us to diagnose some localized recurrences at a time when pelvic exenteration could establish permanent control of the disease.

## SUMMARY

Experience in the treatment of 104 adenocarcinomas of the cervix uteri at Ellis Fischel State Cancer Hospital, 1940-1960 is reported. The five year survival was the same among patients with adenocarcinomas and epidermoid carcinomas of the cervix uteri having radiotherapy as primary treatment.

Pelvic exenteration for central pelvic recurrences controlled the disease in a relatively high number of operable cases (three of seven, 42 per cent).

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# A Rational Basis for Extending the Radical Mastectomy

**Data from the literature and experience at the Ellis Fischel State Cancer Hospital are reported with respect to the correlations of site of the primary tumor, frequency of internal mammary lymph node involvement and five year survival rate. Resection of the internal mammary lymph nodes in conjunction with a radical mastectomy is discussed. Dr. Johnson is Chief Pathologist at the Ellis Fischel State Cancer Hospital, Columbia.**

THE ARGUMENT for extending the radical mastectomy to include the internal mammary lymph node chain in the management of operable cancer of the breast is based upon the following three facts: (1) anatomic studies have shown that the internal mammary chain is a primary lymph node station in the lymphatic drainage system of the breast; (2) systematic biopsies of this chain in the presence of operable breast cancer have shown a high frequency of involvement, especially when the primary tumor is located in the medial hemisphere; (3) it is technically feasible to resect the homolateral lymph node chain with low mortality and morbidity. If, to these three facts, one adds the statement that he proposes to carry out a clinical trial using some form of randomization for division of case material into control and investigative series he then has a sound argument for extending the radical mastectomy on an experimental basis. All such clinical trials are based on the assumption that any maneuver that removes a little bit more cancer is worth trying, provided that the increase in mortality or morbidity does not cancel out the expected gain. In the initial planning, one tries to estimate the expected gain from such data as are available. With regard to the expected gain from resection of the homolateral internal mammary lymph node chain information is woefully deficient. It is the purpose of this paper to point out these deficiencies.

The data will be examined under two headings: (1) the interrelations of site of the primary tumor, survival rate, and frequency of internal mammary lymph node metastases, and (2) the results of treatment reported for the extended radical mastectomy.

## SITE, SURVIVAL AND INTERNAL MAMMARY METASTASES

There are many reports in the literature dealing with the relation of the site of the primary tumor to survival rate following radical mastectomy. The great majority of these reports are surprisingly consistent in that they demonstrate a relatively modest difference in rate of survival between tumors situated in the lateral and medial zones. These differences seldom exceed 10 per cent when all operated cases are included in the comparison. Two representative series are shown in table 1. The first was reported by Nohrman from Stockholm, Sweden in 1949; it consists of 591 patients with operable cancer of the breast, treated by radical mastectomy with or without postoperative radiotherapy.[1] When the cases are subdivided by location of the primary tumor, it is seen that there is a 5 per cent difference in five year survival rate in favor of lateral sector lesions, as compared to those in the medial sector. Central lesions occupy an intermediate position. When one subdivides the groups on the

TABLE 1

OPERABLE BREAST CANCER TREATED BY RADICAL MASTECTOMY

Relation of Site of Primary Tumor to Five Year Survival Rate

| | | *Five Year Survival Rate* | | |
|---|---|---|---|---|
| *Author* | *Sector* | STAGE I | STAGE II | BOTH |
| Nohrman | Lateral | 75 | 41 | 52 |
| | Central | 64 | 39 | 48 |
| | Medial | 53 | 42 | 47 |
| Pierce | Lateral | 82 | 42 | 63 |
| | Central | 91 | 36 | 59 |
| | Medial | 70 | 46 | 55 |

basis of histologic involvement of the axillary lymph nodes, a curious result is obtained. In the cases without axillary lymph node involvement, a substantial difference now appears between lateral and medial sector lesions, there being a 22 per cent difference in five year survival rate. On the other hand, with involvement of the axillary lymph nodes, there is a slight difference (1 per cent) in favor of medial over lateral lesions. The results in the cases without axillary lymph node involvement (Stage I) could be due to metastases in the internal mammary lymph nodes in medial sector lesions. If this be true, then the apparent identity of survival rates in Stage II cases is, to say the least, unexpected. That this result is not peculiar to Nohrman's series is evident from consideration of the second series reported in table 1. This is a group of 416 patients with operable breast cancer treated by radical mastectomy at the Mayo Clinic and reported by Pierce in 1956.[2] The overall picture shows a difference of 8 per cent in favor of lateral over medial sector lesions. When the series is subdivided into Stages I and and II, the difference for Stage I cases increases to 12 per cent. In the Stage II cases, one again has the reverse situation, namely a 4 per cent difference in favor of medial over lateral lesions.

How do these results compare with the known frequencies of internal mammary lymph node involvement? Consider table 2. This table has been borrowed, with modification, from a study by Hultborn and Törnberg, published in 1960.[3] It represents a compilation of four series of operable breast cancer subjected either to extended radical mastectomy or to radical mastectomy with biopsy of the internal mammary lymph nodes. The table shows the frequency of internal mammary metastases in relation to the site of the primary tumor within the breast. In the overall figures, there is a difference of 17 per cent greater frequency of internal mammary metastases in medial as compared to lateral lesions. This 17 per cent difference is certainly great enough to explain the smaller difference of 5 to 8 per cent in survival rates observed in table 1. When the cases are subdivided on the basis of histologic involvement of the axilla, an interesting result is obtained. When the axilla is negative, there is only a 6 per cent difference in the rate of involvement between lateral and medial lesions. When the axilla is histologically involved, there is a substantial difference of 32 per cent. This is just the opposite of what one would have expected on the basis of the difference in survival rates shown in table 1. Thus, one is faced with the unexpected result of an inverse relationship between the difference in survival rate and the difference in internal mammary lymph node involvement. Furthermore, in the Stage I cases the difference in internal mammary lymph node involvement (6 per cent) is substantially less than the difference in survival rate (12 and 22 per cent). Before becoming involved in the problem of constructing a hypothesis to explain these results, one should look at the results of treatment for the extended radical mastectomy.

TABLE 2

OPERABLE BREAST CANCER TREATED BY EXTENDED RADICAL MASTECTOMY OR BY RADICAL MASTECTOMY AND INTERNAL MAMMARY BIOPSY

Relation of Site of Primary Tumor to Frequency of Internal Mammary Metastases

| | *Frequency of Internal Mammary Metastases* | | |
|---|---|---|---|
| *Sector* | STAGE I | STAGE II | BOTH |
| Lateral | 6 | 24 | 15 |
| Central | 4 | 57 | 29 |
| Medial | 12 | 56 | 32 |

## RESULTS OF TREATMENT BY EXTENDED RADICAL MASTECTOMY

In a recent publication from the Frances Delafield Hospital in New York, Guttman has reported the results of treatment in 41 cases of operable breast cancer with proven internal mammary lymph node metastases.[4] These cases had been classified as categorically inoperable after undergoing the triple biopsy procedure described by Haagensen.[5] They were treated by supervoltage irradiation alone and the results are shown in table 3. The five year survival rate in these 41 cases was 54 per cent. Also shown

TABLE 3

FIVE YEAR SURVIVAL RATES FOR OPERABLE CASES WITH PROVEN INTERNAL MAMMARY METASTASES

| | *Five Year Survival Rate* | | |
|---|---|---|---|
| *Author* | TOTAL | SURVIVORS | PER CENT |
| Handley | 33 | 10 | 30 |
| Urban | 27 | 11 | 41 |
| Guttman | 41 | 22 | 54 |

in the table are the results from two other series, as noted by Guttman. In 1959, Urban reported a 41 per cent five year survival rate in 27 cases. In his series, the patients were treated by the technic described by him of en bloc resection of the internal mammary lymph node chain together with a radical mastectomy. The third series was reported by Handley. It is composed of 33 cases derived from a group in which systematic biopsy of the internal mammary lymph node chain was carried out at the time of performing a radical mastectomy. In these 33 cases in which a positive biopsy was obtained, there was a five year survival rate of 30 per cent. The majority of these cases were treated by postoperative roentgen therapy employing conventional voltage equipment.

The wide range covered by the five year survival rate (30 to 54 per cent) strongly suggests that breast cancer can still show considerable variation in its behavior, even when the case material is limited to instances of operable breast cancer with histologically proven internal mammary lymph node metastases. As noted in the previous paragraph, the therapeutic methods in these series also cover a wide range and there is no way of distinguishing in the data between variability of the case material and variation in the effectiveness of the treatment methods employed. These results point out the importance of a well designed clinical trial.

A preliminary report of such a trial is given by Kaae and Johansen.[6] All new, that is, previously untreated cases of breast cancer referred to their Institution were included in this study. They were assigned case numbers on admission and the odd numbered cases were assigned to one series and even numbered cases to the other. Two methods of treatment were employed. The first was the extended radical mastectomy described by Dahl-Iversen which includes resection of both the internal mammary and supraclavicular lymph node groups, in addition to the radical mastectomy. No postoperative radiotherapy was used. The second series was treated by a combination of simple mastectomy and postoperative radiotherapy described by McWhirter. The results for all cases and for clinical Stages I and II combined, the latter corresponding roughly to operable cases, are shown in Table 4. Method 1 in the table refers to the extended radical mastectomy while Method 2 refers to simple mastectomy, combined with postoperative radiotherapy. Approximately 250 cases had been treated by each method. More than 75 per cent of these cases were capable of three year follow-up and 40 per cent were available for five year follow-up. The survival rates have been determined by actuarial methods. At three years there is no recognizable difference. The difference at five years is greater, but still falls within the range of chance variation in case material. The authors expressed the opinion that it might require as much as 10 years of follow-up before a definitive difference became apparent.

TABLE 4

COMPARISON OF THREE YEAR AND FIVE YEAR SURVIVAL RATES OBTAINED WITH EXTENDED RADICAL MASTECTOMY (METHOD I) AND SIMPLE MASTECTOMY WITH POSTOPERATIVE RADIOTHERAPY (METHOD II)

| *Category* | *Survival Rate*<br>3 YEARS | <br>5 YEARS |
|---|---|---|
| All Cases | | |
| Method I | 65 | 55 |
| Method II | 66 | 48 |
| Stages I and II | | |
| Method I | 78 | 64 |
| Method II | 75 | 56 |

One can summarize this section by saying that the reported clinical experience in cases with known internal mammary lymph node involvement shows no substantial difference in effectiveness between radiotherapy and surgery, as measured by the five year survival rate; further, the one reported clinical trial suggests that the same rule may apply to the axillary and supraclavicular lymph node groups.

## DISCUSSION

The most convincing evidence in the preceding two sections for a significant role for internal mammary lymph node metastases is the modest difference in survival rate between lateral and medial sectors when Stages I and II are combined. This modest difference of 5 to 8 per cent correlates well with the observed difference in frequency of internal mammary lymph node involvement (17 per cent). It is conceivable, however, that medial and lateral quadrant lesions may differ, not only in the frequency of internal mammary lymph node involvement, but in the stage of the disease at the time of diagnosis, and even in degree of biologic malignancy, irrespective of stage. If the difference of survival rates between medial and lateral sectors is related solely to biologic type or stage of the disease, then this difference should disappear when efforts are made to make the case material in the two groups more homogeneous. On the other hand, if internal mammary lymph node metastases are the dominant factor, the difference should persist. We have carried out this test in our case material in the following fashion (table 5): (1) The case material consists of 180 consecutive admissions for operable cancer of the breast, capable of 10 year follow-up. (2) From this initial group, 34 cases were excluded because they did not undergo a radical mastectomy leaving a remainder of 146 cases. (3) From the 146 cases, it was necessary to exclude 19 because the primary tumor had been previously excised prior to admission for the purpose of establishing a diagnosis leaving a final group of 127 cases for study. (4) The subdivision by site of the primary tumor has been on the basis of lesions located in the upper-outer quadrant, as compared to all other positions. There were two reasons for selecting this particular subdivision. In the first place, the upper-outer quadrant lesions have the maximum likelihood of involving the axillary nodes and the least likelihood of extending to the internal mammary chain, as compared to the tumors in the remainder of the breast. Second, the descriptions of the location of the primary tumor in our case records are written, rather than by diagram. For the upper-outer quadrant, it was clearly stated that the tumor lay in this position. When the primary tumor was located in other areas of the breast, and particularly when it overlapped the conventional designation of quadrants, the descriptions became somewhat vague and the exact location uncertain. This applied especially to lesions involving the central sector. (5) The 10 year absolute survival rate has been used rather than the five year survival rate in order to include a greater number of late therapeutic failures. (6) After comparing the two groups without further exclusion, two maneuvers have been employed to render them more homogeneous. The first was to exclude tumors with circumscribed growth patterns. In this category are included the papillary, medullary and mucoid adenocarcinomas, the comedo-carcinomas and Paget's disease of the nipple. The second was to place a restriction on the maximum size of the primary tumor by progressively excluding first all lesions 5 cm. or greater in diameter, then 4 cm. or greater, and finally 3 cm. or greater. The measurements were based on those recorded in the pathologist's examination of the specimen.

TABLE 5

TEN YEAR SURVIVAL RATES FOR OPERABLE CASES TREATED BY RADICAL MASTECTOMY

See text for meanings of symbols

| | *Upper Outer Quadrant* | | *All Other* | |
|---|---|---|---|---|
| *Exclusions* | TOTAL CASES | SURVIVAL RATE | TOTAL CASES | SURVIVAL RATE |
| LE | 50 | 50 | 77 | 39 |
| LE + C | 45 | 47 | 61 | 39 |
| LE + C + $5^+$ | 38 | 45 | 48 | 46 |
| LE + C + $4^+$ | 29 | 52 | 40 | 45 |
| LE + C + $3^+$ | 13 | 62 | 23 | 65 |

The exclusion of tumors with circumscribed growth patterns represents an attempt to exclude tumors with a low degree of biologic malignancy. The progressive exclusion by size is a form of staging; this was employed rather than the subdivision on the basis of axillary lymph node involvement for the reason that the latter does not have the same meaning for both medial and lateral sectors and therefore will not yield comparable groups of cases. The difference in meaning is that for lateral sector lesions the axillary route is a major one, whereas for medial sector lesions it is merely an equal alternative or possibly a minor one. The need is for groups comparable in every respect, except for the position of the primary tumor. To subdivide one sector on the basis of spread along its major route and the other on the basis of a minor route does not fulfill this requirement.

The results of the study are shown in table 5. The meaning of the symbols in the column labeled "Exclusions" are as follows:

LE = cases having local excision of the primary tumor prior to admission.
C = tumors with a circumscribed growth pattern.
$5^+$
$4^+$ = maximum size in centimeters of the primary tumor.
$3^+$

The initial difference of 11 per cent in absolute 10 year survival rate is a modest one and conceivably could be related to a difference in frequency of internal mammary lymph node involvement. When one excludes the tumors with circumscribed growth patterns, the difference decreases to 8 per cent and, when one excludes tumors measuring 5 cm. or more in diameter, the difference disappears. Further exclusions results in apparent random fluctuation of the difference but no definite trend. Thus, it is apparent that at least in this series, the effort to achieve homogeneity of case material within the two subgroups results in a disappearance of the difference in 10 year survival rates. This suggests that the difference in survival rate is due to a difference in stage, or in biologic malignancy, rather than to the direction of lymphatic spread.

## CONCLUSIONS

There are four important points that emerge from the data of the previous sections: (1) In Stage I cases, the difference in five year survival rates between medial and lateral sector lesions is substantially greater than the difference in frequency of internal mammary lymph node involvement. (2) In Stage II cases, a large difference in frequency of internal mammary lymph node involvement is associated with no apparent difference in five year survival rate. (3) A difference in 10 year survival rate between upper-outer quadrant lesions and all other positions could be obliterated by rendering the groups more homogenous on the basis of the size and growth pattern of the primary tumor. (4) The results of treatment indicate an equivalent effect of surgery and radiotherapy in the management of internal mammary lymph node metastases.

A simple explanation for all of these facts is that metastases to the internal mammary lymph nodes are rarely, if ever, a cause of therapeutic failure during the first five years of follow-up. To be the cause of therapeutic failure, the metastases must have been the only residual disease upon completion of the operation and subsequently gave rise to distant spread. It seems credible that a cancer that has been present long enough to produce a manifest primary tumor, but has been unable in this same period to establish metastases beyond the primary lymph node stations, is not malignant enough to cause death within the next five years. This is not to say that it cannot do it in 10 or 15 years. Perhaps this is true in general of regional lymphatic spread; perhaps this is why Crile can do simple mastectomies in selected cases, and McWhirter can combine simple mastectomy with postoperative radiotherapy and obtain results comparable to the radical mastectomy.

In analyzing these data, it is important to distinguish between regional lymphatic spread as a cause of therapeutic failure and regional lymphatic spread as an indicator of therapeutic failure. Information regarding lymphatic spread has long been used to estimate the likelihood of therapeutic failure, but this is not the same as saying that it is the cause of the failure. It is possible that both regional lymphatic and distant hematogenous spread stem from the primary tumor itself. Either one, then, may serve as an indicator of the presence and extent of the other. The reason that the correlation is not perfect is the complicated character of the interplay of all those factors that one denotes as host resistance.

It is my opinion that the effect, if any, of internal mammary lymph node resection on length of survival will be found in the second or third quinquennial period of follow-up. It is possible that another effect may become apparent sooner. If a substantial number of skin recurrences are due to retrograde lymphatic permeation from involved internal mammary nodes, then the rate of such local recurrence may be reduced. If this be all that is accomplished by the surgical maneuver, then radiotherapy will prove to be a strong competitor. Whether one or both of these effects prevail, their clear-cut demonstration is dependent upon the use of controlled clinical trials.

## SUMMARY

Data from the literature and from case material at the Ellis Fischel State Cancer Hospital have been examined with respect to the correlations of site of the primary tumor within the breast, frequency of internal mammary lymph node involvement and five year survival rate. The evidence indicates that there is no rational basis for expecting resection of the internal mammary lymph nodes, in conjunction with a radical mastectomy, to increase the five year survival rate. The possibilities remain that the 10 year survival rate may be increased and that local control of the disease on the chest wall may be improved. There is a need for well designed clinical trials in the evaluation of this procedure.

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# Surgical Management of Cystosarcoma Phyllodes: With a Report of Eight Cases

**The management of patients with cystosarcoma phyllodes at the Ellis Fischel State Cancer Hospital is reported.**

**Dr. Long is Surgeon, and Dr. Johnson is Chief Pathologist at the Ellis Fischel State Cancer Hospital, Columbia.**

The purpose of this paper is to review the experience at the Ellis Fischel State Cancer Hospital in the management of cystosarcoma phyllodes. In 1943, Cooper and Ackerman[1] from this hospital recorded the first case in the literature with proven axillary lymph node metastases. Since that time two additional cases with axillary metastases have been seen here.

The name cystoscarcoma does not imply that the lesion is malignant but only describes the fleshy appearance of the tumor. An alternate and more descriptive term is giant intracanicular fibroadenoma. The tumor differs from the fibroadenoma, however, because of its large size or increased cellularity, or both. Early observers noted that the tumor was usually a benign one. Treves and Sunderland in 1951, however, pointed out the variations in microscopic appearance and suggested that therapeutic decisions be made on the basis of size and grade of the tumor. This has been followed to a large extent at this hospital where radical mastectomy has been performed for the more undifferentiated tumors.

## Material

Eight consecutive patients seen between 1940 and 1962 ranged in age from 17 to 82 years. There were seven Caucasian females and one Negro. Six of these patients had large tumors ranging from 20 to 30 centimeters in size. All six gave a history of sudden rapid growth in a previously small tumor present for many years. Two gave a history of spontaneous rupture of the breast. One patient had a tumor only 4 centimeters in diameter classified as a miniature cystoscarcoma.[2] The histologic sections of the entire series were reviewed and the tumors were divided into three groups or grades on the basis of cellularity, cellular atypism and number of mitotic figures.

Four patients were treated initially by simple mastectomy and two of these subsequently underwent radical mastectomy for local recurrences. Three patients underwent radical mastectomy initially. One patient received no surgical treatment because of her poor cardiac status.

## Results

*Survival.*—Table 1 contains the overall survival data in standard life table form. Three patients have died of their malignancy and two patients have died of other causes, one of them with persistent sarcoma. One patient has been followed for only two months. All patients dying of malignancy expired before the end of the third year. There have been two long-term survivors, one for more than three years, and another for more than eight years—free of malignancy. The three year and five year survival rates are 28 per cent.

*Microscopic Classification.*—Table 2 summarizes the data for all patients. One tumor was obviously in the benign category (grade 1), with a microscopic appearance not unlike that of benign fibroadenoma. It was, however, 25 centimeters in maximum diameter. The patient was treated by simple mastectomy and died of heart disease in less than two years.

There were five tumors in the borderline group (grade 2). Four were 20 centimeters or more in maximum diameter and one was only 4 centimeters in diameter. This last patient was treated by radical mastectomy three years ago. No metastasis or local recurrence has been demonstrated. One of the patients in this group died of heart failure within one month after being seen without definitive treatment. The remaining three were treated initially by simple mastectomy. Two developed local recurrences which were excised with axillary dissections. Axillary lymph node metastases were present in both

## TABLE 1

## OVERALL SURVIVAL

| *Year* | *At Risk* | *Withdrawn Alive* | *Dying of Cancer* | *Dying of Other Cause* | *Yearly Survival* PER CENT | *Cumulative Survival* PER CENT |
|---|---|---|---|---|---|---|
| 1 | 8 | 1 | 1 | 1 | 71 | 71 |
| 2 | 5 |  | 1 | 1 | 60 | 42.6 |
| 3 | 3 |  | 1 |  | 66 | 28.1 |
| 4 | 2 | 1 |  |  | 100 | 28.1 |
| 5 | 1 |  |  |  | 100 | 28.1 |

## TABLE 2

## SUMMARIZATION OF DATA

| *Patient* | *Age* | *Grade Tumor* | *Maximum Diameter* | *Axillary Metastases* | *Mastectomy* | *Follow-Up* |
|---|---|---|---|---|---|---|
| C. G. | 51 | 2 (recurrence-3) | >20 cms. | Yes | Simple | Local recurrence—d. 2½ yrs. |
| M. A. | 66 | 2 (recurrence-3) | 23.5 cms. | Yes | Simple | Local recurrence—d. 1½ yrs. |
| A. O. | 57 | 1 | 25 cms. | No (clin.) | Simple | Died of heart disease —1½ yrs. |
| A. B. | 44 | 2 | 23 cms. | No (clin.) | Simple | Free of disease—2 months |
| M. H. | 17 | 3 | 30 cms. | Yes | Radical | Free of disease—8 years |
| F. L. | 50 | 2 | 4 cms. | No | Radical | Free of disease—3 years |
| M. B. | 41 | 3 | Approx. 25 cms. | No | Radical | Died, gen. metastases —9 months |
| R. D. | 82 | 2 | 20 cms. | No (clin.) | None | Died, heart failure—1 month |

## TABLE 3

## SURVIVAL AFTER SIMPLE MASTECTOMY

| *Year* | *At Risk* | *Withdrawn Alive* | *Dying of Cancer* | *Dying of Other Cause* | *Yearly Survival* PER CENT | *Cumulative Survival* PER CENT |
|---|---|---|---|---|---|---|
| 1 | 4 | 1 |  | 1 | 66 | 66 |
| 2 | 2 |  | 1 |  | 50 | 33 |
| 3 | 1 |  | 1 |  | 0 | 0 |

## TABLE 4

## SURVIVAL AFTER RADICAL MASTECTOMY

| *Year* | *At Risk* | *Withdrawn Alive* | *Dying of Cancer* | *Dying of Other Cause* | *Yearly Survival* PER CENT | *Cumulative Survival* PER CENT |
|---|---|---|---|---|---|---|
| 1 | 3 |  | 1 |  | 66 | 66 |
| 2 | 2 |  |  |  | 100 | 66 |
| 3 | 2 |  |  |  | 100 | 66 |
| 4 | 2 | 1 |  |  | 100 | 66 |
| 5 | 1 |  |  |  | 100 | 66 |

patients. Control was not achieved in either case. One patient died two and one half and the other one and one half years after simple mastectomy. The microscopic appearance of the local recurrence was more undifferentiated (grade 3) than random sections of the original tumor.

The four patients in whom grade 3 or sarcomatous stroma was found all developed metastatic tumor. Of the two patients graded thus on the original specimen, one had an axillary metastasis and was well when last seen eight years after radical mastectomy. The other died of generalized metastases nine months after radical mastectomy. The axillary lymph nodes were negative in this patient. Two other patients had grade 3 stroma in local recurrences following simple mastectomy. The original tumors in both instances were grade 2. Both patients had axillary node metastases and died.

*Surgical Treatment.*—With one exception, each patient was treated initially by simple mastectomy or by radical mastectomy. Differences may be noted in the subsequent course of these two groups of patients.

Table 3 depicts survival after simple mastectomy and table 4 following radical mastectomy. After three years the survival is zero for the group treated by simple mastectomy and 66 per cent for the group treated by radical mastectomy. The three year survival was significantly better after radical mastectomy (probability of similar survival in the two groups $<.025$, chi-square = 6, n = 1).

Table 5 depicts the incidence of local recurrence after simple and radical mastectomy, all cases followed for three years or more. Two of the three cases treated by simple mastectomy developed recurrences within the first year, whereas none developed in the group treated initially by radical mastectomy (probability of recurrence with the same frequency in the two groups $<.025$, $X^2 = 6$, n = 1).

TABLE 5

LOCAL RECURRENCE AFTER MASTECTOMY

| | *No. Cases* | *Recurrences* | *Per Cent* |
|---|---|---|---|
| Radical | 3 | 0 | 0 |
| Simple | 3 | 2 | 66 |

These differences become more significant when the grading of the tumors in the two groups are analyzed. Of those treated by simple mastectomy, three were grade 2 originally, and one was grade 1. Of those treated by radical mastectomy two were grade 3 and one was grade 2. The high incidence of metastasis with grade 3 tumors has already been demonstrated.

## CONCLUSION

The prognosis of patients with cystosarcoma phyllodes appears to be dependent upon the degree of differentiation of the tumor and the operative procedure employed. The incidence of axillary metastases in this series suggests that radical mastectomy should be employed for all patients with grade 3 stroma. With grade 2 tumors we are inclined to perform axillary dissection when amputation of the breast is required for removal of the primary tumor because of size. If simple mastectomy is performed the pectoral fascia and skin should be widely excised in an effort to avoid local recurrence. Local excision appears to be adequate for tumors of very low grade. In our experience radical mastectomy is distinctly superior to simple mastectomy in achieving local control and tumor-free survival for the higher grade tumors.

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# Epidermoid Carcinoma of the Vagina

**Twenty-six cases of epidermoid carcinoma of the vagina treated at the Ellis Fischel State Cancer Hospital are reported with factors influencing prognosis and comparison with results from other hospitals.**

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THE INFREQUENCY of primary epidermoid carcinoma of the vagina and the generally poor results attained in its treatment justifies the periodic reporting of clinical data. The purpose of this paper is to report on the experience with this disease accumulated at the Ellis Fischel State Cancer Hospital between 1940 and 1961.

## MATERIAL

Twenty-six patients with primary epidermoid carcinoma of the vagina were admitted to Ellis Fischel State Cancer Hospital among 29,000 consecutive admissions (0.09 per cent) and 2,480 consecutive patients having female genital malignancies (1.0 per cent). By law the 29,000 patients were admitted with the diagnosis or the suspicion of cancer and were declared to be medically indigent by the court in their county of residence. Many had advanced cancer when first seen. This is the most elderly group of patients with epidermoid carcinoma of the vagina yet reported (median age, 69 years). The gross accumulated survival experience for all 26 patients and the age distribution are given in table 1. Tables 2 to 6 correlate the various characteristics of the cancers and therapy employed with host survival. These tables serve as the basis for the discussion.

## METHODS OF TREATMENT

The results of irradiation and surgery cannot be compared in our material as similar lesions have not been treated by the two methods. The basic pattern of therapy has been to treat all lesions of the upper one third of the vagina with the irradiation program in progress at that time for carcinoma of the cervix and to treat lesions of the lower one third of the vagina primarily by surgery. Post-irradiation persistent cancers and cancers involving rectum or bladder are evaluated for pelvic exenteration and two recent patients are presently living free of disease following this operation (table 1). Two elderly patients surviving 77 and 80 months respectively, received many years of palliation from radiotherapy before finally succumbing to their cancers. Details of therapy employed in all patients surviving longer than 24 months is shown in table 6. Tumors favorable for surgical resection but occurring in the very elderly patients who are not candidates for extensive pelvic surgery have to be treated by radiotherapy. The type of radiotherapy and surgery required vary with the intravaginal location and extent of the neoplasm.

## RESULTS

The accumulative five year survival for our patients is 17.3 per cent comparing favorably with 10.5 per cent reported by Livingston[4] and 13 per cent reported by Kaiser.[3] In a Missouri white female population of median age 69 years, about 20 per cent may be expected to die in five years and 45 per cent in 10 years of causes unrelated to the neoplasm.[5] Three additional patients all treated during the last 36 months by radical surgical excision are alive and free of disease at present. The life table prepared from our data on epidermoid carcinomas of the vagina shows that the patients who survive five years are not necessarily free of disease and may go on to die of persistent cancer during the sixth and seventh year of follow-up (table 6).

## DISCUSSION

In the Ellis Fischel State Cancer Hospital material, the factors associated with a more favor-

TABLE 1

LIFE TABLE FOR 26 PATIENTS WITH EPIDERMOID CARCINOMA OF THE VAGINA SEEN AT ELLIS FISCHEL STATE CANCER HOSPITAL —1904-1961*

| *Months Follow-up* | *Cases at Risk* | *Died During Year of Follow-up* | *Withdrawn** Alive* | *Annual Survival* PER CENT | *Cumulative Survival* PER CENT |
|---|---|---|---|---|---|
| 0-12 | 26† | 14 | 2 | 46.1 | 46.1 |
| 13-24 | 10 | 4 | 0 | 60.0 | 27.7 |
| 25-36 | 6 | 1 | 1 | 83.3 | 23.0 |
| 37-48 | 4 | 0 | 0 | 100.0 | 23.0 |
| 49-60 | 4 | 1 | 0 | 75.0 | 17.3 |
| 61-72 | 3 | 1 | 0 | 66.7 | 11.5 |
| 73-84 | 2 | 2 | 0 | 0 | 0 |

* Age range 32 to 89 years, median age 69 years; Follow-up is 100 per cent.
** Alive and well at end of follow-up period.
† Three patients were not candidates for either definitive or palliative therapy.

TABLE 2

LOCATION OF LESIONS

LOWER ONE THIRD OF THE VAGINA—10 CASES
- Positive inguinal nodes on entry . . . 5 cases . . . mean survival = 7.8 months
- Negative inguinal nodes on entry . . . 5 cases . . . mean survival = 24.0 months

MIDDLE ONE THIRD OF THE VAGINA—12 CASES
- Positive inguinal nodes on entry . . . 2 cases* . . . mean survival = 8.0 months
- Negative inguinal nodes on entry . . . 10 cases . . . mean survival = 16.7 months

UPPER ONE THIRD OF THE VAGINA—11 CASES
- Positive inguinal nodes on entry . . . none
- Negative inguinal nodes on entry . . . 11 cases . . . mean survival = 24.6 months

* Both cases also involved the lower one-third of the vagina.

TABLE 3

TYPE OF LESION

| | |
|---|---|
| LOWER ONE THIRD OF THE VAGINA—10 CASES | |
| Inguinal nodes | 5 |
| Metastatic skin nodules over the perineum | 1 |
| Biopsy positive left supraclavicular node | 1 |
| UPPER AND MIDDLE TWO THIRDS OF THE VAGINA—16 CASES | |
| Biopsy positive periaortic lymph node at the level of the pancreas | 2 |
| Massive hepatic metastases | 1 |
| Metastases to the third lumbar vertebrae | 1 |
| Vulvar skin nodules | 1 |
| Periaortic lymph node at the level renal vessels | 1 |

able prognosis are those common to neoplasms in other parts of the body. A small, well differentiated lesion without metastases may be expected to respond favorably while a larger, fixed lesion with nodal spread may be expected to do poorly no matter how radical the surgical approach or massive the dose of irradiation (tables 2, 3, 4). The therapy of all carcinomas of the vagina is made difficult by the close proximity of bladder and rectum and the multiple lymphatic pathways available for metastases including inguinal, deep femoral, iliac, rectovaginal, presacral, obturator and aortic (tables 2 and 3). Also, carcinomas of the vagina may originate at multiple points on the vaginal mucosa. The Schiller test on the entire vaginal mucosa is an aid in the location of occult multicentric primary cancers.

The absolute five year survival figures for carcinoma of the vagina vary from 0 per cent[7] to 46 per cent[6] depending primarily on the stage of the lesion when first seen. James[2] surveyed 538 cases and noted an absolute five year survival of 22.8 per cent. In the 43 cases with involvement of the bladder or rectum, however, there were no five year survivors. Despite our one patient who survived 56 months without therapy (table 6), untreated patients usually die within one year. Way[8] observed 11 patients who were not treated for medical reasons or because of advanced disease. The pretreatment symptoms averaged 5.4 months and survival after diagnosis was 9.4 months. Huber[1] also found no five year survivors in 25 untreated cases.

TABLE 4

SIZE OF PRIMARY LESION

PRIMARY LESIONS 3 CENTIMETERS OR LESS IN SIZE

2/9 cases had metastases*

.................... mean survival = 26.2 months

PRIMARY LESIONS GREATER THAN 3 CENTIMETERS IN SIZE

8/17 cases had metastases

.................... mean survival = 11.5 months

---

* One of these cases had no clinically positive nodes, but had one of 27 nodes positive at the time of pelvic evisceration, vulvectomy and groin dissection.

TABLE 5

SURVIVAL RATES

| | *Grade I* | *Grade II* | *Grade III* |
|---|---|---|---|
| Number cases | 5 | 17 | 4 |
| Mean Survival | 25.8 months | 20.6 months | 9.7 months |
| Survival range | 3-77 months<br>One patient alive after 26 months without disease | 0-80 months<br>One patient alive after 7 months without disease | 5-20 months |

TABLE 6

SURVIVAL TIME AND CAUSE OF DEATH

| *Age* | *Survival After Diagnosis* | *Treatment* | *Cause of Death* |
|---|---|---|---|
| 79 | 28 months | Vaginal hysterectomy and vaginectomy | Died, cause unknown |
| 64 | 36 months | Vaginal hysterectomy and vaginectomy | Alive without recurrence |
| 69 | 56 months | Refused all therapy: allowed biopsy on two occasions | Died, cancer |
| 72 | 64 months | Anterior pelvic evisceration with vulvectomy & bilateral groin dissection: 1/26 nodes positive | Died, cancer |
| 74 | 77 months | 4,000 rads mid pelvic dose-HVL 3 mm. Cu.<br>3,000 mg. hrs. Radium in vaginal cylinder | Died, cancer |
| 75 | 80 months | 3,200 rads mid pelvic dose-HVL 3 mm. Cu.<br>4,000 mgm. hrs. Radium by colpostat<br>4,000 mgm. hrs. Radium by tandem | Died, cancer |

## SUMMARY

Twenty-six cases of epidermoid carcinoma of the vagina treated at the Ellis Fischel State Cancer Hospital are reported. Factors influencing prognosis are noted, and those cases surviving longer than 24 months are reported in detail. The accumulative five year survival for all patients seen was 17.3 per cent, a result comparing quite favorably with results achieved at other institutions considering the advanced age and indigency of the patient population treated at the Ellis Fischel State Cancer Hospital.

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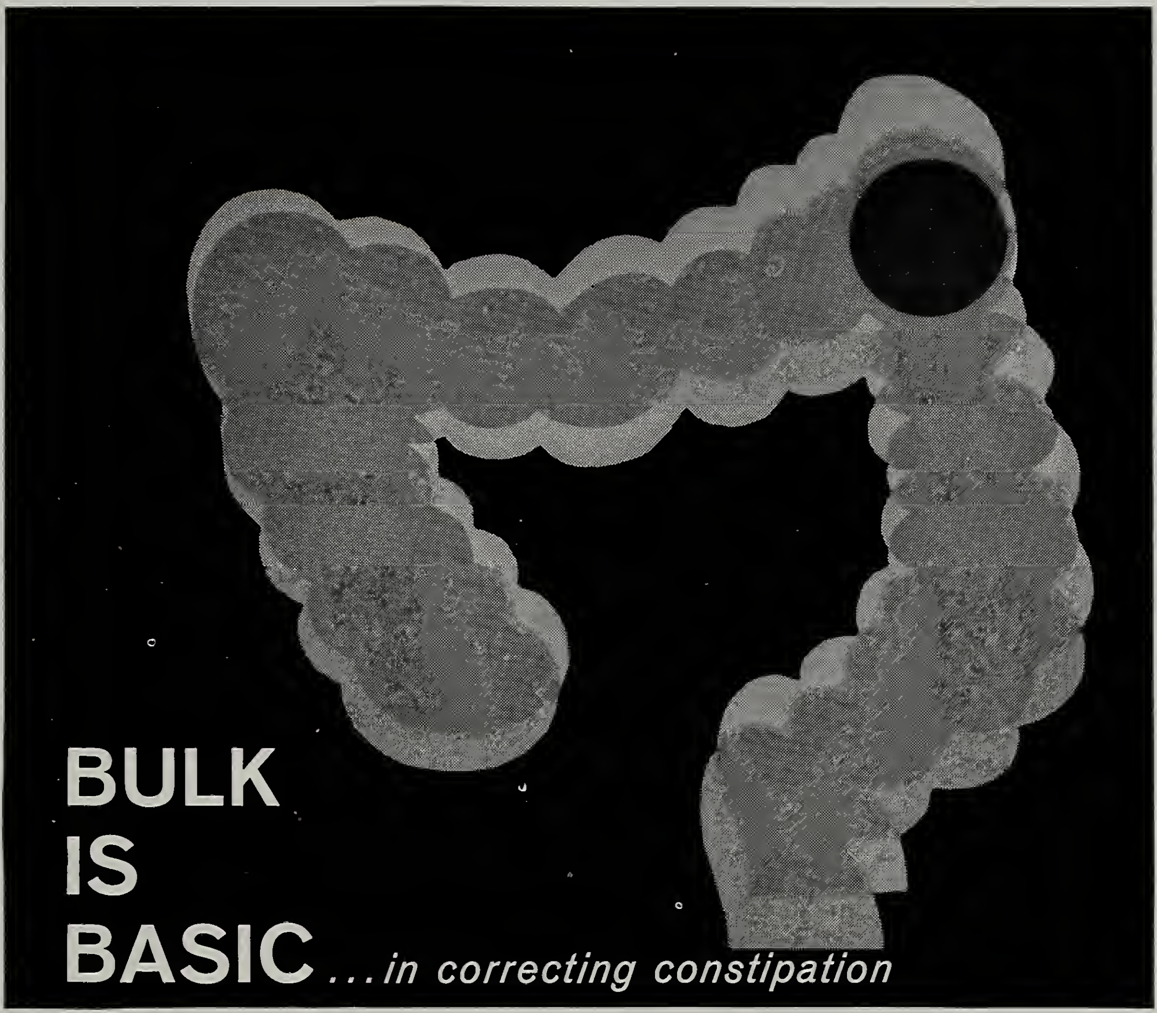

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**CLYDE M. BURCH,** ***Jefferson City***

# Privileged Communications Between Physician and Patient in Missouri

### *Special Article*

The relationship between a physician and his patient is an extremely confidential one. It is generally accepted that a physician can more effectively treat his patients if they make a full disclosure of the facts to him. Since there is a recognized confidential relationship between physicians and their patients in this state, the patient can freely disclose the nature of his maladies with the expectation that the physician will respect the confidential nature of the communication. It is a breach of professional ethics to reveal these confidential communications, except when such revelation is sanctioned by law. These exceptions will be noted in the body of this article.

**Physician-patient relationship is discussed and statutes dealing with privileged communcations are presented, together with illustrations by court findings.**

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In addition to being a violation of professional ethics, possible grounds for revocation of a physician's license or a civil suit for damages, there is a general statute in Missouri rendering physicians incompetent to testify in court as to certain information. Section 491.060, RSMo 1959, provides as follows:

> "The following persons shall be incompetent to testify:
>
> "A physician or surgeon, concerning any information which he may have acquired from any patient while attending him in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or do any act for him as a surgeon."[1]

The Missouri Supreme Court, in discussing this provision of the statute, said:

> "It was intended to invite confidence between patient and physician and to prevent a breach of such confidence, and should be so construed as to further its life and purpose."[2]

Communications between physician and patient were not recognized by the common law as being privileged or confidential.[3] The first statutory recognition of the privilege in this country occurred in New York in 1828.[4] Since that date a majority of the states have recognized the privilege in one form or another.[5]

## Who Can Claim the Privilege?

Under Missouri law it is generally recognized that the statutory privilege is personal to the patient and must be raised, and may be waived, only by the patient or his properly authorized representative. For example, it has been held that ordinarily a parent as natural guardian, has the right to claim the confidential privilege on behalf of the child when it would be in the best interests of the child to do so, but the parent is not permitted to invoke the privilege on behalf of the parent in a neglected child suit brought against the parent.[6]

Before the patient claims the privilege he must be prepared to establish that the physician-patient relationship existed at the time the information was obtained. This determination involves primarily a question of the intent of the physician and patient.[7] If the communication occurs during a diagnosis for treatment, then it should be considered privileged. On the other hand if the information was acquired by a physician during an autopsy, then clearly it would not have been obtained for treatment purposes and would not be privileged.[8]

In appropriate instances the privileged communication can be claimed by the parent, guardian, personal representative or insurance beneficiary.[9] Here too, the information must have been obtained during the existence of and in furtherance of the physician-patient relationship. Disclosures which have no connection with the treatment process are not privileged.[10] Where the physician is employed merely to examine the patient in preparation for testimony in a subsequent trial as to his mental or physical condition, the information obtained is not considered confidential.

### Are Hospital Records Privileged?

Hospital records are kept by the physicians and other members of the hospital's professional staff primarily for the purpose of facilitating the care and treatment of the patient. These records, like the records at the physician's office, contain information supplied to the physician by the patient and they also contain information obtained by the physician as a result of observation. There is no valid distinction between information obtained by the various sensory processes.[11]

Further, insofar as the privilege is concerned, there is no logical distinction between records maintained at the physician's office or clinic on the one hand and records kept at a hospital on the other hand. In a leading Missouri case holding hospital records to be privileged,[12] the court stated:

> "Next defendant seeks to predicate error upon the refusal of the court to admit in evidence certain hospital and dispensary records offered by it, purporting to show, so the offers of proof disclosed, that the insured had received treatments at different hospitals and dispensaries prior to the time of the issuance and delivery of his policy. It appears that such records, if admitted, would have borne largely upon the defense of misrepresentations in securing the policy, though undoubtedly some of them would have been material upon the issue of sound health as the same has been heretofore discussed.
>
> "There is no doubt that records of the kind and character under consideration are admissible in evidence, providing the patient's privilege is waived. Kirkpatrick v. Wells, 319 Mo. 1040, 1045, 6 S.W. (2d) 591, 593; Galli v. Wells, 209 Mo. App. 460, 239 S.W. 894; Knickerbocker v. Athletic Tea Co. (Mo. App.) 285 S.W. 797, 801; Shaw v. American Insurance Union, supra; Marx v. Parks (Mo. App.) 39 S.W. (2d) 570. However, in this instance, there was no waiver of the patient's privilege, and therefore the records were properly excluded. It is true that there was some testimony by plaintiff himself during the making of his case in chief respecting the treatment the insured had received, but such testimony came in on cross-examination, so that, even if it might have otherwise been used as the basis for the claim of a waiver of privilege, it was not voluntary on plaintiff's part, and therefore did not entitle defendant to make use of the hospital records in its possession, or to offer the testimony of the attending physicians of similar purport. Holloway v. Kansas City, 184 Mo. 19, 82 S.W. 89; Monpleasure v. American Car & Foundry Co. (Mo. App.) 293 S.W. 84."

### How and When Can the Privilege Be Waived?

The patient or authorized representative who has the right to assert the privilege also has the right to waive or voluntarily relinquish his privilege of confidentiality. Since the legislature has provided that communications between the physician and patient in furtherance of the treatment process are privileged and since there is no specific provision in the statute for the waiving of this right, the courts in Missouri have been reluctant to find an implied waiver of the privilege.

The fact that a patient calls a physician as a witness does not lift the veil of secrecy as to all of his medical history.[13] On the other hand the privilege as it relates to a particular set of controverted facts cannot be waived in part and retained in part. Where the patient's physician is called as a witness by the plaintiff and testifies concerning certain aspects of the issue in controversy, then the patient can no longer claim the privilege. In the Demonbrun case,[14] the Supreme Court held that:

> "If a patient waives the privilege, it ceases to exist. It may not be waived in part and retained in part."

### Is There a Confidential Relationship Between a Physician Employed at a State Institution and His Patient?

In those cases in which a physician-patient relationship exists for treatment purposes the privilege can be claimed by the patient. The source of the physician's employment or the question as to who pays him or whether he is paid at all is immaterial insofar as determining whether the communications are privileged.[15]

It is generally believed that the physician-patient privilege is justified because it encourages patients to make a full disclosure which will facilitate proper treatment and because there is a traditional right of personal privacy as to sick room disclosures. If this is true as to physician-patient relationships, generally then it should be equally true as to psychiatrists and other physicians in governmental institutions. One text authority[16] has stated:

> "The psychiatric patient confides more utterly than anyone else in the world. He exposes to the therapist not only what his words directly express; he lays bare his entire self, his dreams, his fantasies, his sins and his shame."

In a District of Columbia case,[17] the court construed the statutory privilege as precluding testimony by a psychiatrist from a public mental hospital where the physician-patient relationship had been properly established for treatment purposes. The statute involved was similar to the Missouri statute and the result reached appears to be sound.

### DOES THE REPORTING OF COMMUNICABLE DISEASES TO PUBLIC AGENCIES VIOLATE THE REQUIREMENT OF PRIVILEGED COMMUNICATIONS BETWEEN PHYSICIAN AND PATIENT?

The Division of Health of Missouri has regulations filed with the Secretary of State which require the reporting of certain communicable diseases. The nature and content of the report varies to some extent depending on the disease involved and the preventive measures which must be taken in order to protect the public health.

Courts have repeatedly held that the confidential relationship is not absolute. The duty of the physician in protecting the confidential nature of the communication is recognized both for the benefit of the individual and for sound reasons of public policy. Then one comes to the question of whether the general rule of confidentiality has any exceptions. In a leading Nebraska case,[18] the court stated:

> ". . . The doctor's duty does not necessarily end with the patient; for, on the other hand, the malady of his patient may be such that a duty may be owing to the public and, in some cases, to other particular individuals. Recognition of that fact is given by the statutes in this state, which delegate power to the state board of health, and to municipalities generally, to require reports of, and provide rules of quarantine for, diseases which are contagious and dangerous. An ordinance in Omaha enacted under such power, providing quarantine of communicable venereal diseases, has been sustained by our court in Brown v. Manning, 103 Neb. 540, 172 N.W. 522."

When a physician makes reports as required by law he, of course, has committed no breach of duty toward his patient and no liability should result.

### CONCLUSION

The author believes that there is a logical basis for preservation of the confidential nature of the physician-patient relationship. The privilege is justified as facilitating proper treatment of the patient and as preventing further encroachment on the individual's right of privacy. The exact nature of the privilege and the application of the statutory right involved will gradually become more meaningful as the case law of our state develops.

Supreme Court Bldg.

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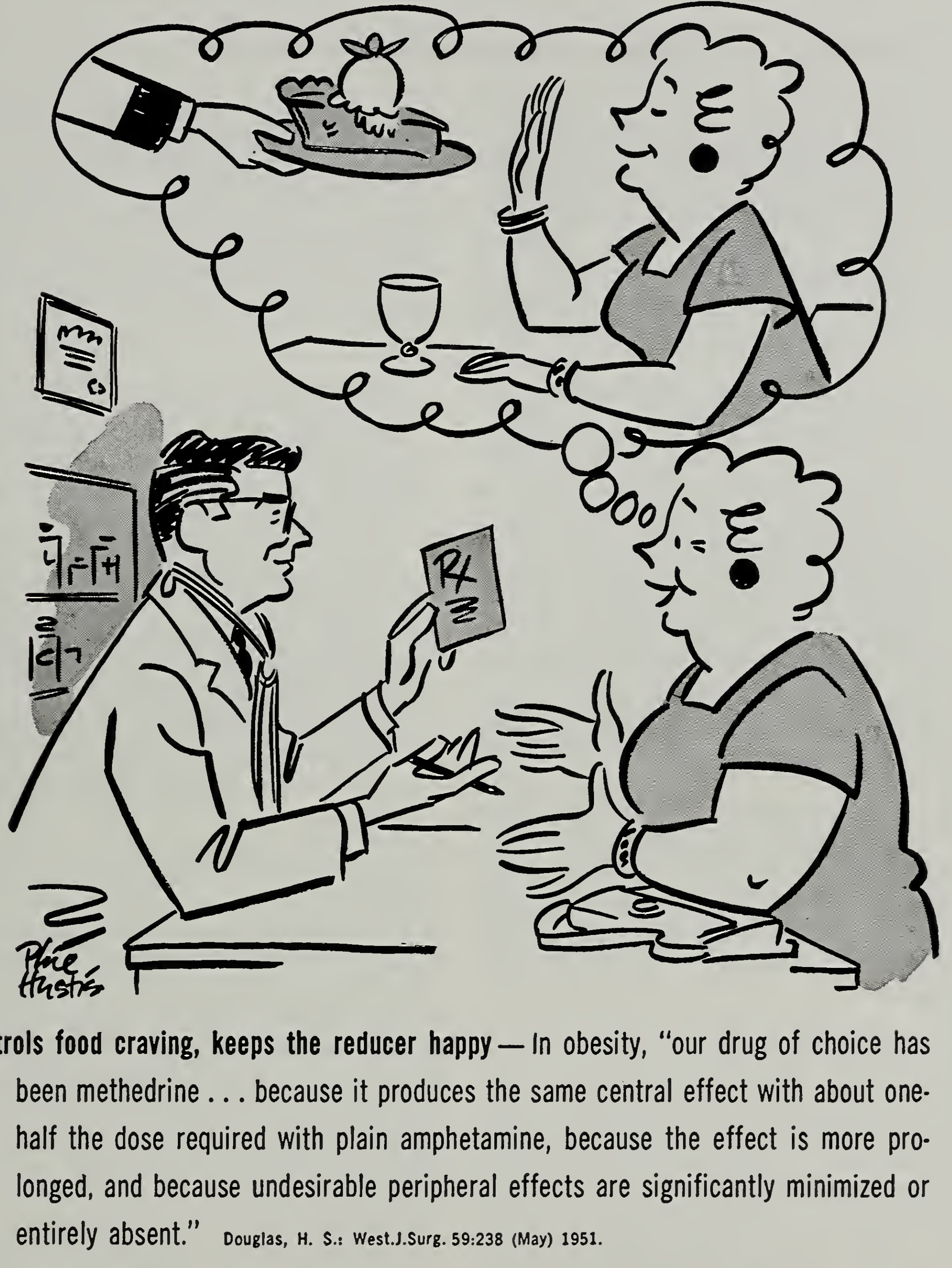

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# Thermonuclear Survival

## *Protection of Houses Against Blast and Fire*

THE CONCERN over a possible hydrogen bomb attack has led to increasing interest in the design of houses which will give some protection against the effects of the bomb. Various designs have been developed by industries whose products would be incorporated into such houses. Examples are the Structural Clay Products Research Foundation and the Portland Cement Association.

It is a good idea to incorporate some protective features into new homes under construction, but it is important to have a realistic understanding of the degree of protection offered. First, it should be clearly understood that for protection against radioactive fallout, the major hazard of a hydrogen bomb, thick earth or poured concrete is needed. Realistically, no one is likely to build houses with walls and ceilings of 20 inch poured concrete or three feet of earth. Therefore, protection from radiation will be incomplete and often inadequate in the blast-resistant house, as compared with a basement or underground bomb shelter.

Indeed, if one had a choice between a blast-resistant house without a basement shelter and an ordinary house with a shelter, the latter would be much safer. On the other hand, if a blast-resistant house does have a basement shelter also, it offers extra protection which may be quite worth while.

### PROTECTION AGAINST BLAST

How much extra protection can a blast-resistant house give? There are practical limits to the strength which can be built into these houses. If any attempt were made to give them the strength to resist blast pressures of 100 or even 30 pounds per square inch (14,440 or 4,320 pounds per square foot), the costs would become absolutely fantastic. One of the major problems is window areas. Windows increase the blast resistance of the rest of the house because they break easily, allowing the blast pressure wave to go through the house instead of collapsing it. However, how much would this benefit the occupants? It is possible to design a house which is blast resistant because of large window areas. After an explosion, the house might remain standing, but the occupants might well be dead.

On the other hand, if window space is reduced, the blast pressure wave would exert more force on the walls, and would be more likely to demolish the entire structure. Thus, care must be used in referring to blast resistance in housing. It would be well to understand exactly how blast resistant a particular house happens to be.

**This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine,* and are published with permission of that journal.**

**Dr. Garb is secretary of Medical Education for national Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.**

**Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.**

In general, it appears that no reasonably priced above-ground structure is likely to resist pressures over 10 pounds per square inch (1,440 pounds per square foot). Most buildings in the United States will collapse at pressures of two pounds per square inch (288 pounds per square foot). Therefore, the blast-resistant house protects in the range of two to 10 pounds per square inch.

This range may seem small at first glance, but it actually involves a considerable degree of protection. The reason is that when a 20 megaton bomb explodes, the area in which blast overpressures are 10 pounds per square inch or greater is approximately 82 square miles. The area in which overpressures are between two and 10 pounds per square inch is approximately 643 square miles. Thus, increasing blast resistance from two to 10 pounds per square inch increases the survival chances of the house about 87 per cent. It will increase survival chances of the occupants provided there is protection against flying glass and a good fallout shelter which they can get into within 10 minutes. The cost of a house which protects against blast up to about 10 pounds per square inch will usually be about 20 per cent more than the cost of a house of standard construction. There are other advantages to blast-resistant houses which should be considered too. They are resistant to tornadoes and can be made fireproof readily. A two-car garage, designed to protect automobiles, also adds about 10 to 20 per cent to the cost of a house. Thus, people who are more concerned about their families than about their cars should consider a blast-resistant house without a garage, but with an attached shelter.

There are several ways of building blast-resistant houses. The exterior walls may be made of poured concrete, concrete block or brick. In any case, they must be properly reinforced with heavy steel rods. The construction details are available in a series of pamphlets published by the industries concerned.[1, 2]

Probably, few families will be willing to spend the money necessary for both a good underground shelter and a blast-resistant house. However, there are things which can be done in house construction, which do not add appreciably to cost, and which will increase survival chances.

## Protection Against Fire

Next to fallout radiation, the greatest hazard from a hydrogen bomb is not blast but heat. Houses may catch fire up to 25 miles from ground zero. Thus the area of vulnerability to fire is over 1,900 square miles. When compared with the area of 725 square miles subjected to blast overpressures of two pounds per square inch or over, it can be seen that fire is more than twice as great a hazard as blast.

Houses probably cannot be made completely fireproof, since they contain inflammable furniture and other items. However, their susceptibility to fire can be reduced greatly with an accompanying increase in survival chances of any occupants.

Whenever possible, fireproof materials should be substituted for inflammable materials in house construction. The term fire-resistant is not the same as fireproof. Fire-resistant materials exposed to a hydrogen bomb flash might burn much like ordinary inflammable materials.

The most important part of the house from the standpoint of fire is the exterior. Most homes have wood exteriors. Obviously, they will catch fire readily. If nothing else can be done, it would be advisable to paint the wood white, since light colored things reflect the heat and are therefore somewhat less likely to burst into flame. If possible, it would be better to substitute a fireproof exterior. There are many choices, including brick, stone, artificial stone, asbestos board, asbestos shingle and aluminum. These are all fireproof and good choices. Brick, stone and poured concrete cost somewhat more than wood exteriors. However, asbestos and aluminum usually cost less, and are excellent choices where funds are limited.

The second most important consideration is the roof. Ordinary roofing can burn in intense heat. Fireproofed roofs can be made of aluminum, slate or tiles in many types of houses. In the blast-resistant house designed by the Portland Cement Association, the roof is made of reinforced concrete, which is, of course, completely fireproof.

Other vulnerable furnishings in the house are the curtains, draperies and blinds. The radiant energy from a hydrogen bomb blast readily penetrates window glass at a distance of 20 to 25 miles, causing any inflammable material to burst instantly into flames. For protection against this hazard some simple steps are recommended. Replace inflammable curtains and draperies with others made of glass fiber. This material is completely fireproof. All blinds should be replaced with venetian blinds made of steel or aluminum. These offer some extra protection in addition to being fireproof. If a blast wave shatters the windows, the venetian blinds will keep most of the glass fragments from striking the occupants.

Although the points outlined are the most important steps in making a house fire-resistant, it is worth while to reduce as much as possible the amount of inflammable material in the house.

In most American homes, the sheathing is inflammable. It may be wood or some sort of composition board which serves also as insulation. The composition board may be treated to make it fire-resistant, but it is not fireproof. A better choice is sheathing made of gypsum which is completely fireproof.

It would be advisable also to have fireproof insulation. Either rock wool or fiber glass are satisfactory.

The framework of the house can be wood. If the exterior, sheathing, insulation and interior walls are made of fireproof materials, the heat from the bomb cannot reach the wood framework in sufficient intensity to make it ignite. Acoustic tile is dangerous and was found to have

(Continued on page 1238)

Donald M. Dowell, M.D.

# President's Message

Now that the elections are over, a decision made by the board of trustees at the last meeting of the Missouri Medical Political Action Committee becomes even more important. While MMPAC is an entirely separate organization, it involves much the same membership as does the Missouri State Medical Association.

The decision made by MMPAC was that in off-election years, it would expend most of its time, energy and monies on educational programs toward better health care of the public.

Commentators vary widely in their views of the influence of the recent elections on "New Frontier"-legislation and only time will tell which of them are correct. However, no commentator nor anyone else doubts for a moment that legislation of the King-Anderson type will be long in being introduced into the Congress. Truly, educational work is going to be needed and MMPAC is congratulated on its decision.

D. M. Dowell, M.D.

# EDITORIALS

## THE ELLIS FISCHEL STATE CANCER HOSPITAL

The idea of a state hospital to care for the indigent cancer patients of Missouri originated with a St. Louis surgeon, Dr. Ellis Fischel. Dr. Fischel was the humanitarian force behind the enabling legislation passed in 1937 to create the Missouri State Cancer Hospital. As chairman of the first Cancer Commission, the professional supervisory body for the Cancer Hospital, he gave his life for his ideal when he was killed in an automobile accident en route to a Cancer Commission meeting at Jefferson City in 1939. The new 104 bed hospital, opened in 1940 at Columbia, was named the Ellis Fischel State Cancer Hospital in his honor.

Since that year the hospital has remained unique in that it admits only patients referred by their family physicians with the diagnosis or suspicion of cancer. Each patient must be declared medically indigent by the presiding judge in the county of residence. No fees are collected for any patient service.

Missouri was the first state west of the Mississippi to support such a humane institution, and the economy and efficiency of the hospital administered by the Division of Health have proved its worth. With no increase in bed capacity the hospital was able to admit 12 per cent more in-patients in 1961-1962 by an increased emphasis on out-patient work-up including all cancer detection procedures. The hospital received special commendation by the American Medical Association Committee on Hospital Accreditation following the 1962 inspection.

Since the hospital opened in 1940, the medical staff has treated 30,722 patients. Two hundred and fifty residents have received training at the Hospital in cancer surgery, radiotherapy and tumor pathology. More than 140 articles, two major texts on tumor pathology and one major text on radiotherapy have been published from the accumulated experiences of this hospital. The staff considers this also to be unique that a small rural hospital dedicated strictly to good patient service has maintained academic standards and traditions.

This December issue of Missouri Medicine contains some of the observations on indigent Missourians with cancer that the staff has had the privilege to treat. The staff wishes to thank the referring physicians who have assisted in the care of these patients and in maintaining a complete follow-up.

Medical Staff,
Ellis Fischel State Cancer Hospital

## TWO OF THREE AMERICAN YOUTHS QUALIFY FOR MILITARY SERVICE

In 1961, as in previous years, approximately two thirds of all American youths liable for military duty were qualified for service in the Armed Forces, according to data released by the Surgeon General's office. The study deals with both draftees and voluntary enlistees.

Proportionately more of the draftees qualified for military service last year than in previous years—51 per cent as compared to 49 per cent in the 1958-1960 period.

Of the draftees not qualified for service, about half were turned down for medical reasons. The other half failed to pass the mental tests. About 1 per cent were rejected for administrative (primarily moral) reasons.

Only about 7 per cent of the applicants for enlistment could not qualify for military service.

## FIRES TAKE MANY LIVES

Destructive fires took a toll of 11,700 lives and more than a billion and a half dollars in property last year in this country according to the National Fire Protection Association.

Almost a third of the fatalities were children. About 6,100 people died in fires in their own homes.

The fire fatality total for 1961 was an increase of 350 more than the previous year. The property loss total was $1,526,300,000. Although this was about $18,000,0000 less than the record 1960 mark, the 1961 figure was the second successive year in which losses exceeded $1.5 billion.

# Ramblings of the Field Secretary

As a welcome preliminary to the Arizona-Missouri football game, Saturday afternoon, October 6, an athletic injuries conference was held at the M.U. Medical Center on Saturday morning. Doctors and athletic coaches representing all areas of the state were present to hear talks on "Injuries to the Urinary Tract," "Orthopedic Injuries," "Injuries to the Central Nervous System" and a panel discussion on "Injuries with Which an Athlete Can Participate," and "How Soon After an Injury May an Athlete Return to Play?"

**The panel members were Drs. Black, Baker, Thompson, Austin and Roulhac.**

The panel moderator was S. P. W. Black, M.D., Professor of Neurosurgery, University of Missouri. Panel participants were: George N. Austin, M.D., Associate Professor of Orthopedic Surgery, University of Missouri; James M. Baker, M.D., University of Missouri team physician; Ian M. Thompson, M.D., Professor of Urology, University of Missouri; and George E. Roulhac, M.D., Clinical Associate Professor of Neurosurgery, University of Missouri.

Vernon E. Wilson, M.D., Dean, University of Missouri Medical School, opened the conference with a warm welcome and then turned the session over to John J. Modlin, M.D., Professor and Chairman, Department of Surgery, who presided over the full morning program.

Interesting questions from the audience were given full treatment by the panel and remarks were overheard at the close of the meeting, from several present, to the effect "Let's have more of this."

**The audience participated in the discussion.**

This program was sponsored by the University of Missouri School of Medicine and Extension Division in cooperation with the Missouri Academy of General Practice.

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**WASHINGTON**

*(Continued from page 1152)*

Sept. 27. The House passed the compromise version of H.R. 10 by a vote of 361 to 0.

Sept. 27. The House passed the drug control bill (H.R. 11581). The bill was amended on the floor to bring it into closer conformity with the Kefauver bill (S. 1552).

Sept. 28. The Senate passed the compromise version of H.R. 10 by a vote of 70 to 8.

Oct. 2. Senate-House conferees unanimously passed a compromise version of drug control bill.

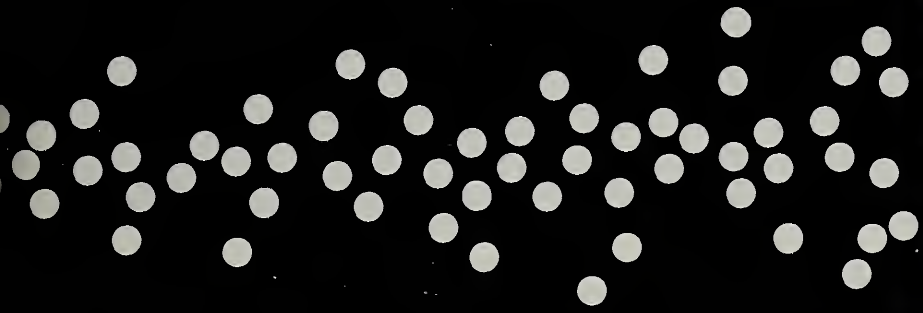
Oct. 3. The Senate passed drug control bill.

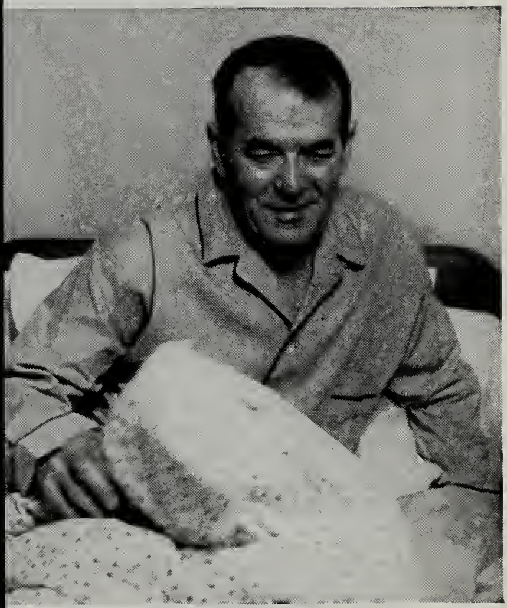
Oct. 4. House passed the drug control bill.

Oct. 10. President Kennedy signed drug control bill as Public Law 87-781.

Oct. 11. The House and Senate passed and sent to the President a bill combining the Curtis bill (H.R. 10117) and the medical deduction bill (H.R. 10620).

Oct. 13. The Second Session, 87th Congress, adjourned.





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# News—Personal and Professional

The Missouri Institute of Psychiatry, dedicated on October 22 at the St. Louis State Hospital, will be known as the Louis H. Kohler Building, honoring **Louis H. Kohler**, M.D., St. Louis, who has served as superintendent of the State Hospital since 1941. In dedication remarks by Governor John M. Dalton, he said that "Dr. Kohler is well known as one of Missouri's mental health leaders."

Recently elected officers of the medical staff of Burge-Protestant Hospital, Springfield, are **Michael J. Clarke**, M.D., president; **Francis J. Ellis**, M.D., president-elect; **William C. Francis**, M.D., secretary, and **Carle H. Schroff**, M.D., treasurer.

The first annual Missouri Mental Health Award made by the Missouri Association of Mental Health was presented to **Emmett F. Hoctor**, M.D., Farmington, at a meeting late in September. Dr. Hoctor was honored by the association for his 36 years of service in public mental health care and treatment.

Speaker at a meeting of the Western Missouri Chapter of the American Physical Therapy Association in Kansas City on October 9 was **James E. McConchie**, M.D., Kansas City. His subject was "Radiological Demonstration of Diseases of Bone."

The Department of Medicine of the Menorah Medical Center, Kansas City, held its annual A. Morris Ginsberg Memorial Seminar on November 7 and 8. The guest speaker was Solomon Papper, M.D., professor of medicine and chairman of the department, University of New Mexico School of Medicine.

"Children's Surgical Problems" was discussed by **Victor G. McDonald**, M.D., Kansas City, before the Columbian Pre-school group early in September.

Recently elected president of the medical staff of St. Joseph's Hospital, Kirkwood, was **Quentin M. Gaines**, M.D., St. Louis. **J. Roger Nelson**, M.D., was appointed director of medical education at the hospital.

At the Cherokee School, Kansas City, on October 1, **John J. O'Hearne**, M.D., Kansas City, spoke on "Parents, Teachers and Children."

Two papers were presented by **Williston P. Bunting**, M.D., Kansas City, at the annual meeting of the Western Association of Railway Surgeons in Elko, Nevada, late in September. He spoke on "Benign Lesions of the Larynx" and "The Changing World of Otology."

On October 19, the *Kahoka Gazette-Herald* carried a picture and story of **J. R. Bridges**, M.D., Kahoka, who celebrated his 99th birthday on that day. He continues daily practice at his office and attends Masonic Lodge meetings regularly. Dr. Bridges is one of the world's oldest Masons, having been a member for more than 72 years.

Among 1,100 surgeons inducted as fellows of the American College of Surgeons at a mid-October meeting were the following MSMA members: Drs. **George A. Oliver**, Farmington; **John H. Nesselrode**, Independence; **Buford T. Casebolt**, **Victor G. McDonald** Jr., and **James L. Russell**, Kansas City; **Otto K. Thiele**, St. Charles; **Charles R. Willman**, St. Joseph; **William R. Cole**, **Marshall B. Conrad**, **Theodore J. Dubuque** Jr., **Keith E. Pipes**, **Robert K. Royce**, **Warren G. Stamp**, **Jessie L. Ternberg**, **Francis S. Walker**, and **Wesley E. Hayek**, St. Louis.

President of the newly organized city board of health and welfare in St. Joseph is **John R. Forgrave**, M.D., St. Joseph. The board was created by a new city charter. Dr. Forgrave was former president of the board of health.

Speaking at a recent meeting of the Pershing Memorial Hospital Auxiliary at Brookfield, **B. D. Howell**, M.D., Brookfield, chose for his subject "Doctors Are People Too."

The Jasper County Medical Secretary's Society recently had as speaker **Ralph L. Ferguson**, M.D., Joplin.

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# New Director of AMA'S Scientific Division Announced

Hugh H. Hussey, M.D., dean of Georgetown University School of Medicine, Washington, D. C., and chairman of the American Medical Association's Board of Trustees, has been appointed director of the AMA's Division of Scientific Activities.

Dr. Hussey's appointment was announced October 30 by F. J. L. Blasingame, M.D., executive vice president of the AMA.

Hugh H. Hussey, M.D.

Dr. Hussey, a native of Washington, D. C., and a graduate of the medical school of which he is dean, will resign from the Board of Trustees later this year and assume his new duties in 1963 at such time as he can be relieved of his responsibilities as dean.

"The American Medical Association is extremely fortunate in being able to secure the services of Dr. Hussey to direct this important division whose activities in the area of medical science and education are of tremendous importance to the medical profession and the public," Dr. Blasingame said. "Dr. Hussey is widely known in the fields of medical education and internal medicine, and his exceptional administrative abilities coupled with his extensive knowledge of all phases of AMA activities and programs will be invaluable assets to this association."

As director of the AMA Division of Scientific Activities, Dr. Hussey will administer the programs of seven departments with more than 130 employees and an annual budget in excess of $2,000,000. These departments include Foods and Nutrition, Drugs, Medical Physics and Rehabilitation, Medical Education and Hospitals, Nursing, Scientific Assembly and Advertising Evaluation.

Dr. Hussey has long been active in medical organizations. He joined the Medical Society of the District of Columbia in 1936 and was elected to the AMA policy-making House of Delegates from the District of Columbia Society in 1950. The House of Delegates elected him to the Board of Trustees in 1956. He served as vice chairman of the Board in 1960-61 and was elected chairman in June, 1961.

## NEW MEMBERS

**J. O. Alyea**, M.D., 1873 Marietta St., Cape Girardeau, has become a member of the Cape Girardeau County Medical Society. Dr. Alyea is a native of Kansas, received his preliminary education at Kansas University, and his M.D. degree at Kansas University in 1954.

**Selbert G. Chernoff**, M.D., 4601 Independence Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Chernoff is a native of New York, received his preliminary education at the University of Buffalo, and his M.D. degree at the University of Buffalo in 1952.

**Joseph Clancy Jr.**, M.D., Box 482, Osceola, has become a member of West Central Medical Society. Dr. Clancy is a native of New York, received his preliminary education at City College in New York and Fordham College, and his M.D. degree at St. Louis University in 1961.

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**James F. Davenport,** M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Davenport is a native of South Carolina, received his preliminary education at the University of North Carolina, and his M.D. degree at the University of South Carolina in 1956.

**Robert W. Doering,** M.D., 6400 Prospect Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Doering is a native of Nebraska, received his preliminary education at Valparaiso College, and his M.D. degree at the University of Nebraska in 1957.

**Richard H. Gier,** M.D., Grandview Clinic, Grandview, has become a member of Jackson County Medical Society. Dr. Gier is a native of Illinois, received his preliminary education at the University of Kansas, and his M.D. degree at the University of Chicago in 1958.

**Watson W. Kaminsky,** M.D., 3728 Hydraulic Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Kaminsky is a native of Connecticut, received his preliminary education at St. Mary's College, and his M.D. degree at St. Louis University in 1957.

**Henry A. Lee,** M.D., Professional Bldg., Kansas City, has become a member of Jackson County Medical Society. Dr. Lee is a native of Missouri, received his preliminary education at the University of Arkansas, and his M.D. degree at the University of Missouri in 1958.

**Howard S. Liang,** M.D., 715 Colebrook St., St. Louis, has become a member of St. Louis Medical Society. Dr. Liang is a native of China, received his preliminary education at National Sun-Yet College and his M.D. degree in Sen Medical College in 1940.

**John E. Mullins,** M.D., 3720 Washington Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Mullins is a native of Missouri, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1958.

**D. LeRoy Parsons,** M.D., 24 N. Sprigg St., Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Parsons is a native of Missouri, received his preliminary education at Southeast Missouri State College, and his M.D. degree at the University of Tennessee in 1958.

**F. Wendell Pence,** M.D., 612 South Main St., Carthage, has become a member of Jasper County Medical Society. Dr. Pence is a native of Missouri, received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1961.

**Robert A. Raich,** M.D., 4320 Wornall Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Raich is a native of Illinois, received his preliminary education at Wabash College, and his M.D. degree at Northwestern University in 1956.

**Elbert C. Shackleford,** M.D., 9406 E. 63rd St., Kansas City, has become a member of Jackson County Medical Society. Dr. Shackleford is a native of Tennessee, received his preliminary education at Memphis State University, and his M.D. degree at the University of Tennessee in 1959.

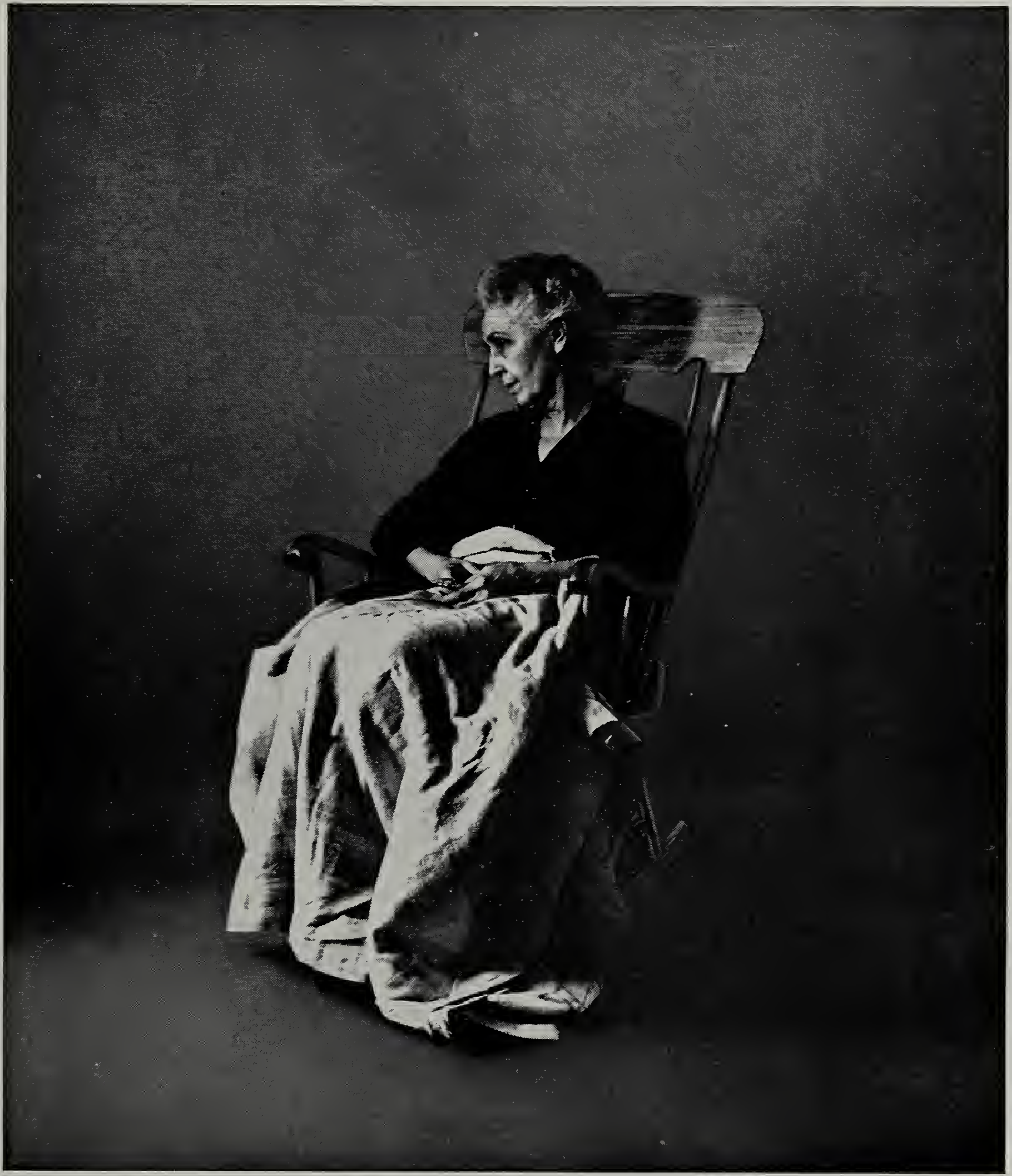
**Katherine W. Smith,** M.D., 801 West 58th Terrace, Kansas City, has become a member of Jackson County Medical Society. Dr. Smith is a native of Missouri, received her preliminary education at Vassar University, and her M.D. degree at the University of Kansas in 1950.

**Martin B. Smoller,** M.D., 207 North 5th St., St. Charles, has become a member of Lincoln St. Charles County Medical Society. Dr. Smoller is a native of New York, received his preliminary education at Washington Square College, and his M.D. degree at New York University in 1956.

**William L. Threlkeld Jr.,** M.D., 1735 Baltimore Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Threlkeld is a native of Virginia, received his preliminary education at Virginia Polytechnic, and his M.D. degree at the University of Virginia in 1957.

**Laurance A. Trulove,** M.D., 1222 McGee St., Kansas City, has become a member of Jackson County Medical Society. Dr. Trulove is a native of Texas, received his preliminary education at the University of Colorado, and his M.D. degree at Baylor University in 1944.

**Joseph N. Tygett,** M.D., 1912 Broadway, Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Tygett is a native of Illinois, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1956.



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# County Society News

## FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

### Buchanan County Medical Society

The October 3 meeting of the Buchanan County Medical Society was held at the Myrtle E. Miller School in St. Joseph. Physicians were guests of Misses Myrtle E. and Gladys B. Miller, principal and faculty member of the school, and whose brother, the late Dr. Eugene A. Miller, was a member of the Buchanan County Society for more than 40 years. The school is one of the best in the country in the field of special education. The school program is based on a four-point system of character building; personal health and hygiene; industrial and vocational training, and academic program.

Dr. John R. Forgrave presided at the meeting. At the business session, the Society restated approval of the fluoridation of the city water supply for which an ordinance was pending before the St. Joseph City Council. Also approved was a proposal from the Buchanan County Tuberculosis Society for intradermal testing for tuberculosis in the county, public and parochial schools and a pilot study test of the tine method in one of the county schools.

Herbert C. Senne, M.D., *Secretary*

## SECOND DISTRICT

A. P. ROWLETTE, MOBERLY, COUNCILOR

### Chariton-Macon-Monroe-Randolph County Medical Societies

Dr. Hans G. Clamann, Chief of the Bioastronautics Department, School of Aerospace Medicine, Brooks Air Force Base, Dallas, Texas, spoke on space medicine at the annual public relations dinner meeting of the Chariton-Macon-Monroe-Randolph County Medical Society at the Moberly Country Club on Thursday night, October 11. Some 135 people attended including Society members, their wives and guests.

In an excellent presentation, Dr. Clamann used slides, blackboard sketches and a movie film to bolster his remarks. He pointed out that weightlessness in space travel is one of the most interesting space problems and it is thought that men can adapt themselves to it.

The speaker was born in Gross-Schwuelper, West Germany, and studied medicine and the natural sciences at the universities of Goettinghen, Munich and Heidelberg.

Dr. Gretchen D. Collins of Macon, President of the Society, presided at this outstanding affair.

J. Will Flemming, M.D., *Secretary*

## FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

### Lincoln-St. Charles County Medical Society

Twenty physicians attended a dinner meeting of the Lincoln-St. Charles County Medical Society at the Golf View Inn, St. Charles, on Tuesday evening, October 30. The evening festivities began with a social hour followed by a steak dinner and then the program.

The audience awaits beginning of program.

The scientific presentation of the evening was given by Francis J. Burns, M.D., St. Louis, Asso-

Secretary Muenster, President Rother and the speaker, Dr. Burns, were seated at the head table.

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1. Stevenson, L.E.: M. Ann. District of Columbia *30*:409 (July) 1961.

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Prescribing information adopted Jan. 1961

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ciate Professor of Clinical Surgery, St. Louis University Medical School, on the subject "The Management of Polyps of the Rectum and Colon." Dr. Burns presented this subject in a most informal and interesting manner and the general discussion which followed was ample evidence of audience interest in his talk.

Following the scientific program a short business meeting was held. In addition to our speaker Dr. Burns, our guest list included Ray McIntyre of the State Medical Association.

V. P. Muenster, M.D., *Secretary*

## SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

### Lafayette-Ray County Medical Society

The October meeting of the Lafayette-Ray County Medical Society was held on October 9 at Maib's Cafe, Lexington. An after dinner business meeting was held, at which time three letters from the American Medical Association were read and discussed concerning the political aspects of medicine and the coming elections.

A short discussion was held concerning the educational program of the future.

President, George Davault, announced that the Richmond group would be responsible for the next program.

Wayne Boydston, M.D., *Secretary*

### West Central Missouri Medical Society

The regular meeting of the West Central Medical Society was held the evening of October 11 at the Spring Steak House in Eldorado Springs.

Dinner preceded the meeting.

The usual cocktail and social hour preceded a fine steak dinner served by the management of the new Spring Steak House.

Following the dinner the meeting was called to order by President Don Giesler who introduced Dr. and Mrs. Durward Hall, honored guests of the evening, and Dr. and Mrs. Doyle McCraw of Bolivar.

Following the introductions, Dr. Hall, who is representative in Congress from the Missouri 7th district, addressed the Society. He discussed a number of actions by Congress which were of vital interest to all doctors. Dr. Hall presented some things which were food for thought in these coming months. The Society is grateful to him for the great effort he made to get to this meeting and enjoyed hearing his timely remarks relative to the future of medicine.

The ladies remained for the program.

A short business meeting was held following the scientific portion of the program. The application of Dr. Joseph Clancy who has recently become associated with the Tri-County Clinic of Osceola, with Dr. Geisler, was reviewed, passed favorably upon by the Credentials Committee, and unanimously approved by the Society. Dr. Robert Wheeler who recently became associated

Dr. Durward G. Hall was the speaker.

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# The Council

The Council met at Hotel Muehlebach, Kansas City, September 29, 30, 1962, with Leonard T. Furlow, M.D., St. Louis, Chairman, presiding. Those present were Drs. Furlow; Joseph L. Fisher, St. Joseph; A. P. Rowlette, Moberly; Paul R. Whitener, St. Louis; Byron M. Stuart, Boonville; O. B. Barger, Harrisonville; Hector W. Benoit, Jr., Kansas City; Doyle C. McGraw, Bolivar; E. A. Stricker, St. James; Donald M. Dowell, Chillicothe; Kenneth C. Hollweg, Kansas City; John I. Matthews, Jefferson City; Vernon E. Wilson, Columbia; H. M. Hardwicke, Jefferson City; Messrs. John W. Noble, Kennett; Gary Schnedler, Springfield; W. H. Bartleson, Frederick S. Mowry, Kansas City; Edgar Mothershead, Gene Lunn, Jordan Singleton, Lemoine Skinner, Hollister Smith, T. R. O'Brien, Thomas P. Fox, Ray McIntyre, St. Louis; Mr. Frank Woolley, Chicago. Attending a part of the meeting were Drs. Joseph V. Finnegan, St. Louis; George W. Forman, St. Joseph; H. E. Petersen, St. Joseph; William D. Perry, St. Louis; D. Elliott O'Reilly, St. Louis; Ralph Perry, Richard H. Kiene, Victor B. Buhler, Gerald L. Miller, William C. Mixson, Kansas City; Senator William J. Cason, Clinton; Mr. John A. Hailey, Jefferson City.

### TELEPHONE LISTING

It was reported that the classified telephone listing of physicians in the Kansas City area has been rearranged after consultations between MSMA, Jackson County Medical Society and the American Medical Association.

### STATE MEMBERSHIP

It was reported that the county society membership status of physicians living in either Kansas or Missouri and practicing in the other state has been clarified as a result of a meeting between representatives of the Kansas and Missouri State Medical Associations.

### AMA LETTER

A letter from the AMA thanking the Council and Staff members for their assistance in opposing the King-Anderson bill was read.

### TREASURER'S REPORT

The Treasurer's Report was presented, together with a request that the Treasurer be empowered to convert some of the investments into cash if it becomes necessary before the end of the year. On motion of Dr. Dowell, duly seconded, it was voted to accept the report and to authorize the Treasurer to proceed as requested.

### FIELD SECRETARY'S REPORT

Mr. McIntyre reported on a number of special programs held throughout the state since the last meeting of the Council and told of these programs, as a meeting with lawyers, society golf tournaments, programs on athletic injuries. He said that at a meeting of the Missouri Health Council on September 26 it was decided that there would be a state-wide meeting on "Medical

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with Dr. Edward Jones of Harrisonville is also a new member of this Society.

The next meeting will be held at Harrisonville in November. The Christmas meeting in December will be at Butler with the program to be given by Dr. Robert Myers of Kansas City. No further business was presented and the meeting was adjourned. Ray McIntyre, Field Secretary, of the State Medical Association, was present at the meeting. The Society is always glad to have him in attendance.

Carter W. Luter, M.D., *Secretary*

## NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

### Mid-Missouri County Medical Society

A dinner meeting of the Mid-Missouri County Medical Society and the doctors' wives was held at the Shepherd of the Hills Motel-Restaurant in Lebanon on Thursday night, October 25. Evening festivities began with a social hour followed by dinner and then the program.

Those present were treated to a most interesting discussion by Robert Duncan, M.D., Springfield, who spoke on "Some Aspects of Medicine in the Soviet Union." Dr. Duncan completed a recent scientfic tour in Russia and thereby gained first-hand material for his presentation. He used slides as an adjunct to his discussion.

M. K. Underwood, M.D., *Secretary*

## TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

### Mineral Area County Medical Society

Frank A. Palazzo, M.D., St. Louis, Section of Neurosurgery, St. Louis University School of Medicine, spoke at a meeting of the Mineral Area County Medical Society, Thursday night, October 25, at the State Hospital in Farmington. The subject of his talk was "The Intervertebral Disc Syndrome." This program was furnished by St. Louis University Medical School in cooperation with the MAGP and the Medical Education and Hospitals Committee of the MSMA.

Paul Dennis, M.D., *Secretary*

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Quackery" held at the Governor Hotel, Jefferson City, on April 25, 1963, sponsored by the Health Council.

He reported future meetings including the Kansas City Southwest Clinical Society October 1 to 4; the Southeast Missouri Cancer Conference at Cape Girardeau on October 7; The West Central Medical Society with Congressman Durward Hall as speaker on October 11; the annual assembly of the Missouri Academy of General Practice in St. Louis on November 3 and 4.

### PRECEPTEES

Mr. McIntyre reported that only 11 senior medical students at the University of Missouri were taking training with preceptors this year.

### DIVISION OF HEALTH

Dr. Hardwicke reported that Dr. Earl Loyd of Jefferson City was now on the part time staff of the Division as a consultant and that the Division is acting as the agency for radiology and health for the state. He discussed the situation on polio immunization and said that probably by the end of November more definite information would be available.

### KANSAS CITY GENERAL HOSPITAL

Dr. Wilson reviewed the actions that had preceded the relationship between the Kansas City General Hospital and the University of Missouri School of Medicine. He said that an administrator had been employed who will begin on October 15. He said that teaching would be principally by a voluntary staff. He said that it is hoped that the new arrangement will increase the number of Missouri graduates who receive intern and residency training in Missouri. He said that unofficially a VA hospital is scheduled to be built in Columbia in 1964.

### MEDICARE

Mr. O'Brien presented material from the Medicare office requesting that Missouri Medical Service administer the entire program in Missouri rather than using the facilities of the two Blue Shield plans. It was pointed out that the two plans now administer the program in their respective areas on the basis of actual costs per claim. It was suggested that the Medicare office be informed that the two plans should handle Medicare on an actual cost basis, as they are now doing, under two contracts as at present. On motion of Dr. Hollweg, duly seconded, it was voted to recommend this.

### SCHOOL IMMUNIZATIONS

Dr. Dowell called attention to the fact that the new law concerning immunization of school children did not cover teachers, bus drivers and other personnel that come in contact with the school child. On motion of Dr. Dowell, duly seconded, it was voted that Dr. Hardwicke confer with the Department of Education and bring back recommendations to the Council.

### MENTAL HEALTH

Dr. Forman reported for the Committee on Mental Health as follows:

The Committee on Mental Health met at the Missouri Hotel in Jefferson City on July 1, 1962, Dr. Forman presiding as Chairman.

*Resolution.*—A resolution introduced in the 1961 House of Delegates by Dr. Reinhardt Dwyer of Clay County and referred by the House to the Committee on Mental Health was discussed. It was pointed out by the former and present chairmen of the Committee that further information on the intent of the resolution had been sought, but had not been received from the author. The Committee expressed its feeling that mental health activities should be carried out by scientific mental health organizations, as called for by the resolution, and that Dr. Dwyer should be so advised.

*Osteopathic Students in Mental Hospitals.*—A letter from Dr. George A. Ulett, Acting Director of the Division of Mental Diseases, asking the opinion of the Council on the use of osteopathic senior students in the state mental hospitals was read. The Council referred the letter to the Committee on Mental Health. Following discussion the Committee decided that it should approve the request but that every effort should be made toward adequate supervision of the students and that this action not be in lieu of other adequate staff and help; also that an evaluation of the program be submitted to the Committee after a year.

*AMA 1961 Conference.*—Dr. Haddock gave the following report on the annual conference of mental health representatives of state medical associations held in Chicago on February 2 and 3, 1962.

"This conference was particularly significant in that it was another step in the preparations being made for the first AMA National Congress on Mental Health scheduled for October 4, 5 and 6, 1962, in Chicago. It is planned that this Congress will involve 2,500 participants, both physicians and non-physicians. The Congress will undoubtedly help determine the direction in which programs for the care of the mentally ill will go for many years to come. What committees such as ours do, or fail to do, about selecting the participants in this Congress and about the issues brought up at this Congress will therefore be of lasting importance. There have been three steps in setting the stage for the first Congress.

"The first step was the study of the Joint Commission and its report 'Action for Mental Health.' We have reviewed the obvious stand this report takes for federalization of our public mental hospitals, outright advocacy of independent participation by non-physicians in hospital administration and medical procedures such as psychotherapy, and the almost complete omission from consideration of the tremendous contributions private psychiatric facilities have made and can make to this whole problem. The Board of Trustees of the AMA has already gone on record with the statement that the Joint Commission report 'be considered as the basis for a program which the AMA can endorse and support after the recommendations of the National Conference on Mental Health to be held in 1962 are available.'

"The second step was a preliminary program conference on mental illness and health sponsored by the AMA Council on Mental Health and held in Chicago on September 29 and 30, and October 1, 1961. This was a hand-picked group, and though not as inclined toward federalization and non-medical participation as the Joint Commission, it still failed to take a forthright stand such as our Committee has on these important issues. For the most part it straddled the controversial issues brought up in the Joint Commission report.

"The third and final step was the February 2 and 3,

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1962, meeting of the representatives of the State Medical Associations. Unfortunately, this meeting was rather poorly attended. A significant development that occurred the day before the meeting was that Dr. L. Bartemier, chairman of the Council for many years, was replaced. Presumably this was because of an AMA rule limiting the number of years a chairman may serve. On the other hand, one would wonder if there is any significance in the fact that Dr. Bartemier has been a prime figure in the Joint Commission study, and that objections to this report may have been a factor in his replacement. In any event, the new chairman is Dr. Lauren Smith, formerly vice chairman, and the new vice chairman is a comparative newcomer, Dr. Lindsay Beaton, of Tucson. A number of important conclusions were reached at this meeting on February 1 and 2. The psychiatrist should assume most of the responsibility for communication of mental health information. The private practice of psychiatry should be strengthened and extended by improved and broader insurance coverage for psychiatric illnesses. The responsibility for the care and treatment of psychiatric patients rests only with physicians. These are only a few of the highlights of a comprehensive report which included recommendations regarding medical education, research, personnel problems, community mental health services, hospital programs and communication of mental health knowledge.

"In conclusion, I would like to state that I believe it extremely important that the Mental Health Committee of our State Association concern itself to the utmost with preparations for this First National Congress on Mental Health. With 2,500 participants to be invited, Missouri should be represented by at least 30 or 40 persons. If so, there should be 20 or 25 physicians in the group. One group at the recent meeting in Chicago of the state association representatives went on record with the recommendation that at least 75 per cent of the participants should be physicians. It was suggested that the State Medical Association play a key role in selecting the participants in the First Congress. This would occur through the President, Executive Secretary and the Mental Health Committee. Informed and influential representatives from medical schools, state governments, mental health associations, educational groups, service clubs, religious organizations, industrial organizations, labor unions, insurance companies, etc., should be recommended for selection. It was felt that a blanket invitation to all of these groups to send a representative to participate would be unwise. Instead, the State Medical Society can help select the kind of people who will exert a constructive influence in the deliberations of the Congress, and in the local communities after the Congress has issued its report. Therefore, I think it will behoove this Committee to start immediately to think about the kind of participants it wants to decide these issues and the kind of program it wants this Congress to work toward."

*October Conference.*—The National Congress on Mental Health to be held in Chicago, October 4, 5, 6, 1962, was discussed. It was pointed out that only persons suggested by the states would be invited to the Conference and that some names of physicians and laymen had been submitted. Other members of the Committee who had not done so were asked to submit names. It was reported that there will be a steering committee from each state and Dr. Forman and Dr. Dowell were asked to appoint this steering committee when it was known who would attend the meeting. It was agreed that the Committee should meet in Chicago on the first evening of the meeting to decide future actions regarding the Congress. Of those present at the Committtee meeting, Drs. Forman, Lawrence, Haddock, Weiss and Guhleman expect to attend the Congress.

*Federal Monies.*—The acceptance of federal monies was discussed and it was pointed out that at the November 5, 1961, meeting this had been disapproved. After discussion the Committee decided that federal money was coming into the state and that as long as it was restricted to education, research and construction and the actual control remained in the local community and the state, that it was acceptable.

*Future Plans of Commission.*—Dr. Haddock discussed the future plans of the commission for work in mental health in the state, stressing principally the plan for intensive treatment and training centers in St. Louis, Kansas City and Columbia. It is hoped that there will be connections with the universities in this work. He gave statistics showing that good results had been obtained in the intensive centers now operating and that it was hoped that a residency and staff program would attract more physicians to the psychiatric field. He said that traveling clinics which had been established will not be pushed. Legislation will be necessary from the standpoint of obtaining an appropriation of about $10,000,000 for some needed buildings for the plan.

*Prepaid Health Insurance.*—Dr. Forman gave a brief report on a study of health insurance coverage for psychiatric care, indicating that it was far less than for practically all other diseases. Mr. O'Brien was asked to obtain data from local and neighboring state plans as to the extent of present psychiatric coverage.

*Narcotic Addiction.*—Dr. Forman read releases from the AMA as of May 14 relating to drug addiction and it was suggested that a portion of the report be published in Missouri Medicine.

*Osteopathic Students.*—Dr. Forman called attention to the letter from Dr. George A. Ulett to the Council asking approval of osteopathic students working in state mental hospitals and which was referred to the Committee. The Committee action was that this be approved but stresses the need for proper supervision.

A motion by Dr. Whitener, duly seconded, that this be approved lost on vote. Dr. Benoit suggested that Dr. Ulett be notified that it has been disapproved but that it would be reconsidered by the Council if an outline of the program and its scope were presented.

Dr. Forman reported that the Committee had attempted to get clarification on a resolution that had been introduced in the 1961 House of Delegates by the delegate from Clay County but had received none and the Committee approved the portion which read "mental health activities should be carried out by scientific mental health organizations." On motion of Dr. Hollweg, duly seconded, this portion of the report was approved.

The National Congress on Mental Health to be held in Chicago, October 4, 5 and 6 was discussed briefly. On motion of Dr. Whitener, duly seconded, the report with the one exception relating to osteopathic students, was approved.

### MENTAL HEALTH RECEIVING CENTERS

On motion of Dr. Fisher, duly seconded, it was voted to ask Dr. Ulett to attend the next Council meeting and to outline the plan on the intensive treatment and

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training centers as reported in the Committee report and to discuss the program of training of osteopathic students.

### ANNUAL SESSION

Dr. Matthews reported on the program for the Annual Session giving subjects of panels and presentations planned and speakers that had been obtained. He expressed appreciation for the organizations that were assisting in the program. While Monday and Tuesday will be devoted to scientific presentations, it is planned that the Wednesday morning session be devoted to a medico-legal or medico-economic program.

Plans for the Sunday evening dinner were discussed and it was suggested that the Woman's Auxiliary be asked to handle the dinner and include a speaker on AMPAC as part of the program.

### KERR-MILLS

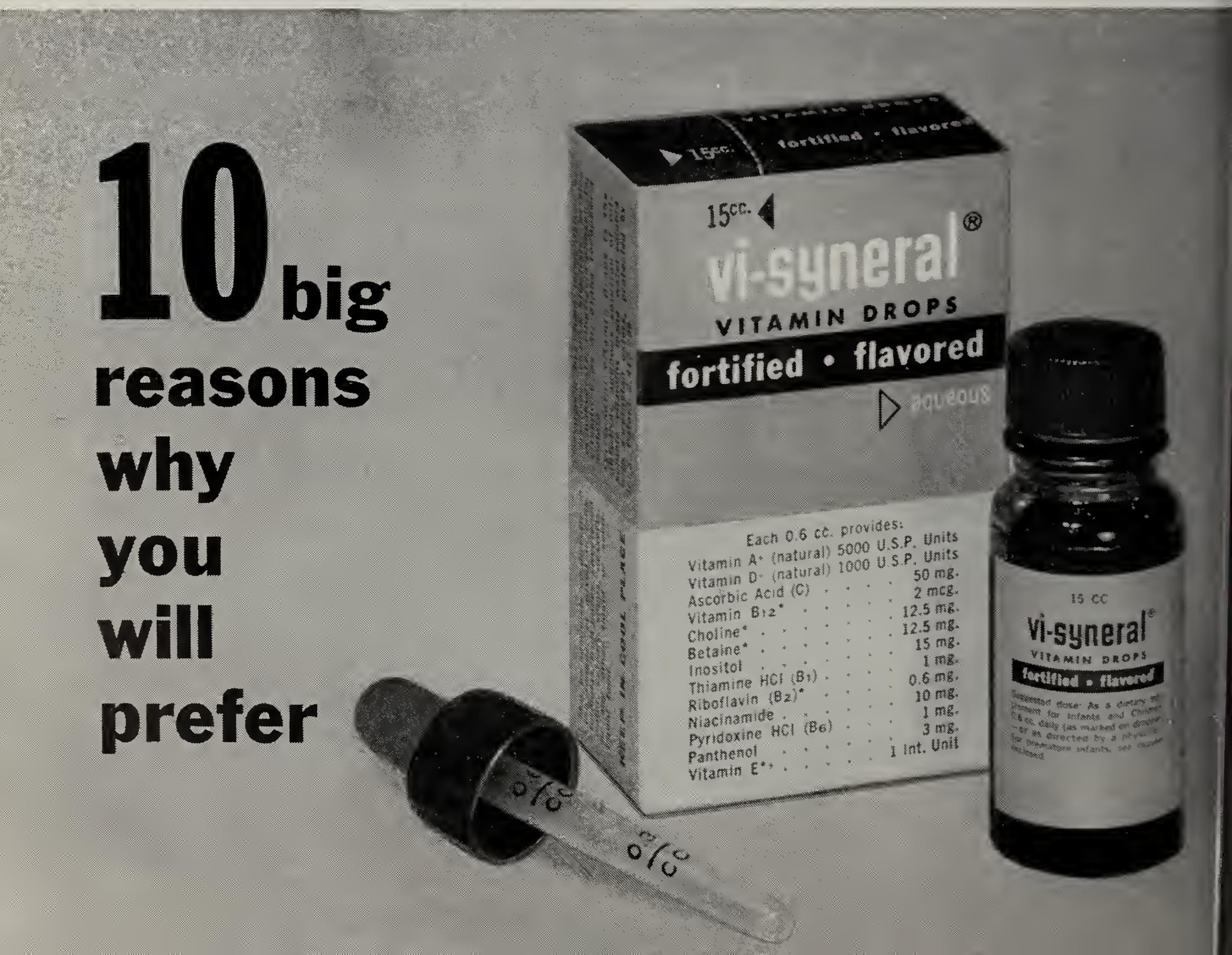
Senator Cason reviewed briefly the Kerr-Mills implementation bill introduced in the last General Assembly and said that the lateness of introduction and the lack of information on which to base expected cost led to the appointment of the Special Committee of the Legislature to Study Medical Care Aspects of the Aging, of which he is chairman. He said that the committee has had several meetings with representatives of interested groups. He said that the report of the committee was being prepared and it was hoped that it could be made public by October 30, including a drafted bill which he hoped would be both S.B. 1 and H.B. 1 in the next Legislature. He said that many things had been considered including the liberalization of what "acute illness and emergency" meant. The feeling of the committee is that the greatest need is for those on the OASI rolls. He called attention to the difficulty in Illinois, West Virginia and Colorado where programs were started on too broad a scope and said that the committee wished to start with a program that can be maintained, then broadened as it becomes possible. He said that it is estimated that it would cost between 4 and 5 million dollars of state money to establish a program, depending to a great extent on how inclusive any coverage of drugs was anticipated. Senator Cason said that legislation to establish a Commission on Aging was being considered.

### MSMF

Dr. Furlow reported on the Missouri State Medical Foundation as follows:

Missouri State Medical Foundation
Receipts 9/25/62

| | |
|---|---|
| Received from MSMA | $75,000.00 |
| Received from donors prior to March 1962 | 3,020.00 |
| Received from solicitation letters (34 donors) July, 1962 | 1,012.00 |
| | $79,032.00 |
| Expenditures | 74,455.00 |
| Balance on hand | $ 4,577.00 |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Vitamin D* (natural) 1000 U.S.P. Units
Ascorbic Acid (C) 50 mg.
Vitamin B12* 2 mcg.
Choline* 12.5 mg.
Betaine* 12.5 mg.
Inositol 15 mg.
Thiamine HCl (B1) 1 mg.
Riboflavin (B2)* 0.6 mg.
Niacinamide 10 mg.
Pyridoxine HCl (B6) 1 mg.
Panthenol 3 mg.
Vitamin E** 1 Int. Unit
15 cc
vi-syneral®
VITAMIN DROPS
fortified • flavored

*Breakdown:*

| | |
|---|---|
| Total number of loans | 158 |
| Students receiving more than one loan | 52 |
| Students receiving only one loan | 28 |
| Loans granted to students | 80 |

Dr. Furlow asked that more help be given in obtaining funds for the Foundation and pointed out that a letter that had gone to the membership brought a very meager response. He said that educational and charitable foundations in the state are being contacted. It was suggested that the Woman's Auxiliary be encouraged to take more interest in the Foundation. Free space has been given by a number of Medical Bulletins in the state for Foundation ads.

### KEOGH BILL

Mr. O'Brien reported that the Keogh Bill had just been passed but that full particulars of its context were not available as yet.

### SOCIAL SECURITY

Mr. O'Brien called attention to information that the government will require everyone to have Social Security or tax numbers and said that further information on this will appear in MISSOURI MEDICINE.

### AMA SESSION

Dr. Petersen reported briefly on the June session of the AMA and called attention to the report of the session which appeared in the August issue of MISSOURI MEDICINE.

### TEMPORARY LICENSE

Dr. William D. Perry, Chairman of the State Board of Registration for the Healing Arts, discussed the need for granting of temporary licenses or certificates for interns and residents and also foreign graduates, without citizenship, for the purpose of assisting in securing personnel for the state mental hospitals. He said that the temporary license should be for one year and would be renewable. He said that 20 to 25 states have such provision for periods of from one to five years. This was discussed by several Council members, Dr. O'Reilly, Dr. Wilson and Mr. Hailey. On motion of Dr. Hollweg, duly seconded, it was voted to approve in principle the plan of a temporary license but that a specific draft be presented to the Council before definite approval is given.

### EXAMINATION FEES

Dr. Perry asked approval of legislation providing that fees be raised for licensure examinations from $12.50 for Part I and $12.50 for Part II, to $25.00 and $25.00. He explained that the only income that the Board has is from examination and registration fees. On motion of Dr. Dowell, duly seconded, this was approved.

### REGISTRATION FEES

Dr. Perry also asked approval of legislation providing an increase to $10.00 per biennium for registration fees. The present fee is $2.50 per year or $5.00 per

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1. provides vitamin $B_{12}$.
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6. vitamin $B_6$ . . . anticonvulsant vitamin.
7. lipotropic agents.
8. other essential B complex factors and vitamin C.
9. delicious fruity flavor.
10. no burps . . . no fish oil taste or odor . . . allergens removed.

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biennium. On motion of Dr. Hollweg, duly seconded, this was approved.

### PROBATION

Dr. Perry pointed out that in the present law there is no provision for probation, only suspension or revocation of licenses and said the board felt that probation would be useful. On motion of Dr. Benoit, duly seconded, this was approved.

### PHYSICAL THERAPIST LICENSING

Dr. O'Reilly discussed the desire of the physical therapists to be licensed. He pointed out the difficulty of this licensing being placed under the State Board of Registration for the Healing Arts and the disadvantages of it being under a separate licensing board. It was the feeling of the Council that licensing of physical therapists be approved if a bill is drafted which is satisfactory to the board. On motion of Dr. Dowell, duly seconded, this was approved.

### CORPORATE PRACTICE

Dr. Perry said that the Attorney General has previously stated that no change in the medical practice act is necessary if the board adopts a code of ethics by regulation, outlining requirements for doctors desiring to practice on a group basis under state corporation laws. However, he stated that additional information on that subject had just been received that morning and he had not had a chance to study it. On motion of Dr. Hollweg, duly seconded, this entire matter included the new information was referred to the Committee on Corporate Practice.

### MMPAC

Dr. Ralph Perry reported briefly on MMPAC and AMPAC. Mr. Woolley reviewed the situation on candidates for the Congress and stressed the necessity of the work of both MMPAC and AMPAC.

### PUBLIC SERVICE

Dr. Dowell appointed the following Committee on Public Service: Drs. Byron M. Stuart, Chairman; Kenneth Hollweg, Kansas City; Armand Brodeur, St. Louis; Fred L. Wommack, Crane; and Dr. Dowell.

### REDISTRICTING

Dr. Dowell appointed the following Committee on Study of Redistricting: Drs. J. H. Summers, Lebanon, Chairman; Ben M. Bull, Ironton; Don C. Weir, St. Louis; Ralph Perry, Kansas City; and Chester L. Clark, Trenton.

### BUDGET COMMITTEE

Dr. Furlow appointed the following Budget Committee: Drs. Charles R. Doyle, Chairman; Dowell, Hollweg, Stuart, Barger and Furlow.

### CIVIL DEFENSE

Dr. Barger reported that Dr. Carl D. Siegel wished to have booth space at the Annual Session for a Civil

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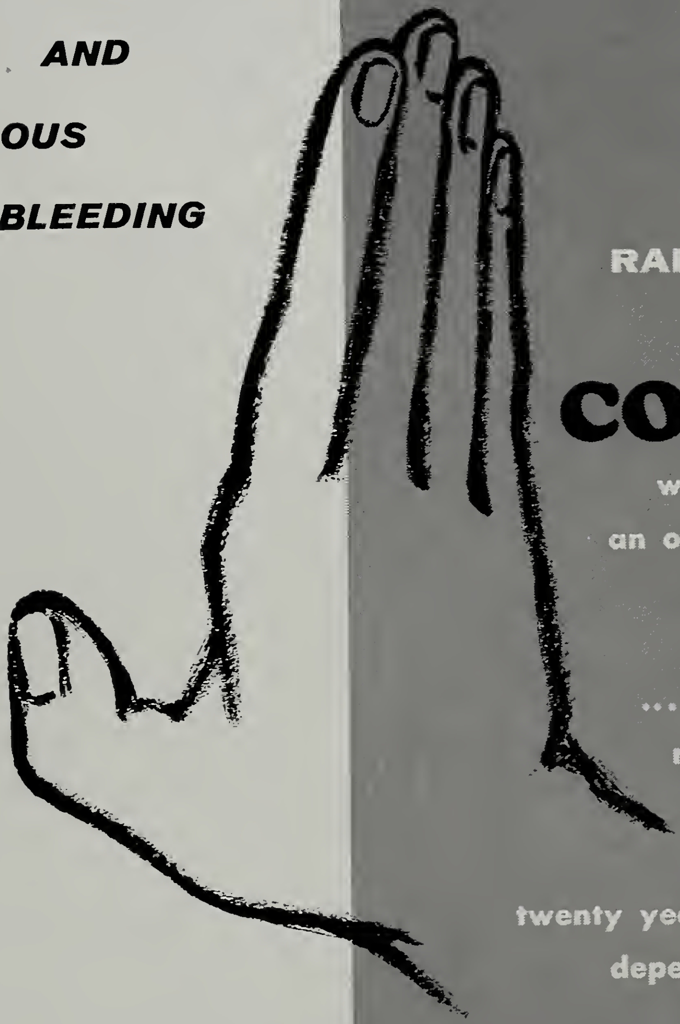

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Defense Exhibit and moved that such be made available. On second, this was voted.

### PENSION PLAN

Mr. Smith asked if employees of St. Louis Medical Society might go under the same pension plan for employees that is in force with MSMA and was informed that there is a provision so that employees of any component medical society may do so.

Dr. Benoit asked for information on the pension plan for Jackson County Medical Society.

### DR. AND MRS. HOLLWEG

On motion of Dr. Barger, duly seconded, Dr. and Mrs. Hollweg were thanked for their hospitality on Saturday evening.

### NEXT MEETING

The next meeting was set for December 8 and 9 in St. Louis.

Leonard T. Furlow, M.D., *Chairman*

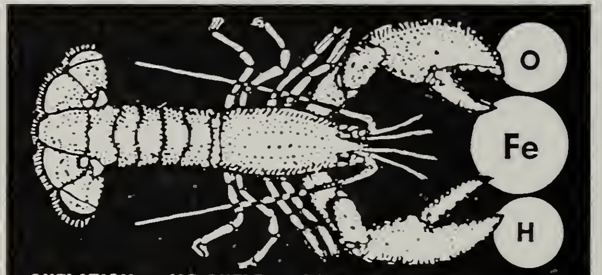
## WOMAN'S AUXILIARY

*(Continued from page 1154)*

more currently informed, she conferred in Chicago with Mr. Jim Reed, Director, Department of Communications of the AMA who also saw the need, and who recommended that the Auxiliary request the extension of Miss Jean Meyrick's services in his department for this purpose. Since the *AMA News* reaches every doctor in the AMA and, according to a recent survey, is read by 38 per cent of their wives (a much larger percentage than now subscribe to the *National Bulletin*), this was a dramatic idea and one which Betty pursued successfully. As a consequence, beginning in January, 1963, the *AMA News* will appear every week instead of every two weeks, with a special Auxiliary section. News for this will go through the hands of Miss Meyrick who will cull material from all state Auxiliary publications, state reports, and medical society bulletins for reprinting in the *AMA News, Today's Health* and The PR DOCTOR letter. Her office should immediately be put on the mailing lists of our local and state medical societies and the state Auxiliary. This is a remarkable breakthrough for the National Auxiliary and may mark a turning point in the development of our future national programs.

"Mississippi River Lore" was the Banquet theme for the Conference and the table decorations reminded us of the adventuresome Tom Sawyer and Huck Finn. Dr. Donald M. Dowell, Chillicothe, President of the Missouri State Medical Association, who was our honored guest,

*(Continued on page 1232)*



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Bibliography: 1. Cohen, A., et al.: J.A.M.A. 165:225, 1957. 2. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 3. Moravec, C. L. and Moravec, M. E.: Clin. Med. 7:2322, 1960. H-416

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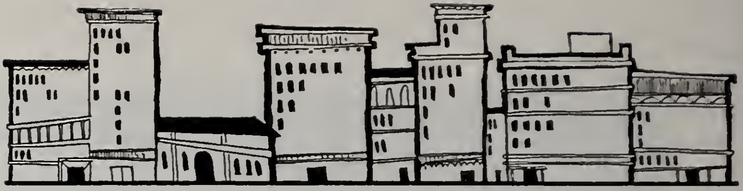
# From the Medical Schools



## WASHINGTON UNIVERSITY

### Radiobiology Seminar to Be Held

A course entitled "Technology of Radioactive Isotopes in Biology and Medicine" will be offered at Washington University School of Medicine by the Radiation Hazards Committee from December 6 through December 20. The course is directed to investigators who are interested in applying radioactive isotopes in their studies. The emphasis will be on basic concepts of the utilization of radioactive isotopes in life sciences, rather than on clinical applications. There will be approximately 15 lectures and five laboratory sessions during the seminar. Enrollment for the laboratory sessions is limited but attendance is open for the lectures. Dr. Michael Ter-Pogossian, professor of radio-physics, is in charge of the seminar. Partial support is being obtained from the Atomic Energy Commission and the Medical Education for National Defense.

### Medical Society Meets

New officers were elected and four students given awards for excellence in scholarship at a meeting of the Washington University Medical Society recently.

Dr. William H. Daughaday, associate professor of medicine, was named president of the society, which is composed of all students and faculty members at the Medical School. Dr. Jack Strominger, professor of pharmacology and microbiology, was elected vice president, and Dr. William Sleator, associate professor of biophysics in physiology, was chosen secretary.

Undergraduate scholarship awards went to Ronald Gene Evans, Herculaneum, Missouri, who was presented the Roche Award of a watch and scroll for outstanding scholarship during the first two years of medical school, and to Patrick O'Donoghue, Oklahoma City, the Alumni Scholarship Award of $200 for general excellence in work during the previous year.

Evans and James C. Ellsasser, Mishawaka, Indiana, were awarded the McCordock Book prizes for excellence in pathology.

Peter L. Schwartz, Chicago, received the George F. Gill and Kehar S. Chouke prizes for superior work in anatomy during the freshman year.

Elected to the Medical Society council at the Wednesday meeting were Dr. Jessie L. Ternberg, assistant professor of surgery; Dr. John C. Herweg, assistant professor of pediatrics; Dr. Sam Clark Jr., assistant professor of anatomy, and Dr. Robert Packman, instructor in medicine.

Reporting on research projects at the Medical School were Dr. J. Harold Burn, visiting professor of pharmacology from Oxford University; Dr. William H. Danforth, assistant professor of medicine and U. S. Public Health Service and special fellow in biological chemistry, and Dr. Stephen Kinsky, assistant professor of pharmacology.

### USPHS Awards

Washington University School of Medicine has received $2,555,249 in new and renewal research and training grants from the United States Public Health Service.

Of this total $269,256 is for new projects, while the remainder will furnish continued support for projects now in progress through previous USPHS support.

Largest new grant of $30,701 was awarded to Dr. Lillian Recant, associate professor of medicine and preventive medicine, and Dr. William H. Daughaday, associate professor of medicine. It will support the first twelve months of a long-term study concerning the relation of treatment of diabetes to the various complications produced by that disease. The Washington University group will coordinate its work with that of nine other medical research institutions. All 10 centers will cooperate as parts of the government sponsored study and will trace the effect of four different methods of treating diabetes on the development of heart, kidney, visual and vascular disorders in diabetes.

A $26,450 grant to Dr. Jessie L. Ternberg, assistant professor of surgery, will be used for further studies on the role of free radicals in biological processes. The work is being undertaken in association with Dr. Barry Commoner, professor of plant physiology at Washington University.

Previous research of the two scientists has shown a remarkable increase in the free radical concentration found in liver biopsies from cases

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of obstructive jaundice. This discovery may prove to be a useful test in the differential diagnosis of jaundice.

Dr. Teresa Vietti, assistant professor of pediatrics, received a $17,660 grant to evaluate and establish rapid and simple laboratory technics to aid in the diagnosis of lead intoxication in children. She will establish the incidence of cases presenting usual symptoms of lead poisoning with those that must be diagnosed by laboratory technics at St. Louis Children's Hospital and evaluate different forms of therapy.

Dr. Alexander Margulis, professor of radiology, was awarded a $16,150 grant for study of a method of obtaining plastic imprints of the gastrointestinal tract. This procedure was developed with Dr. Galen Cook, research fellow in surgery.

A $12,125 grant was made to Dr. Carl A. Moyer, Bixby professor and head of the department of surgery, and Dr. Burl Dillard, instructor in surgery. They will perfect a technic to visualize hepato-pancreatic ducts by non-operative technic developed in experimental animals and apply it to patients. This procedure could be beneficial to diagnosing cancer of the pancreas, gallstones in the common bile ducts of jaundiced patients and other lesions of the pancreas and bile ducts.

Dr. Sam Clark, assistant professor of anatomy, was awarded a $5,750 grant for study of the processes by which animals produce antibodies.

A $5,000 grant will aid Dr. Ferris N. Pitts, research instructor in psychiatry, in his investigation of abnormalities of metabolism of lactic acid in persons with anxiety neurosis. Dr. Pitts also received a research career development award, presented by the Public Health Service to help further the studies of young investigators.

A $5,000 grant will be used by Dr. Bernard Becker, professor and head of the department of ophthalmology, in instituting a joint research project with the University of Bern, Switzerland.

New training grants were awarded to Dr. Fred C. Reynolds, professor of orthopedic surgery; Dr. Frank R. Bradley, professor of hospital administration, and Dr. William E. Powers, associate professor of radiology, for developing graduate training in each of their fields.

U. S. Public Health Service fellowships were awarded to William W. Hahn, medical psychology; David N. Dietzler, pharmacology and Dr. Cynthia Lark, microbiology.

Renewal research and training grants were made to the departments of anatomy, biological chemistry, medicine, ophthalmology, otolaryngology, pathology, pharmacology, preventive medicine, psychiatry and neurology, radiology and surgery.

## ST. LOUIS UNIVERSITY

### Dr. Morlan Honored

St. Louis University honored Dr. Halford J. Morlan, a 1905 medical graduate on two occasions during Founders Week. He was the recipient of the University's Alumni Merit award in medicine at a Founders Week convocation held in the University's Gymnasium October 22. The next day he was the recipient of the first honorary Master of Surgery degree conferred in the University's 144 year history at a convocation held at the School of Medicine.

The degree was conferred by the Very Rev. Paul C. Reinert, S.J., University president, in recognition of Dr. Morlan's achievements "as a physician, teacher, medical missionary, humanitarian, outstanding American citizen and Christian layman." Dr. C. Rollins Hanlon, director, department of surgery, read the University citation acclaiming Dr. Morlan's significant contributions to medical science and humanity since his graduation from the University 57 years ago. Dr. G. O. Broun, dean, presided at the convocation attended by students and faculty. Dr. Morlan specialized in surgery during his medical career. He established practice in Champaign County, Ill., and later in Chicago. He founded and maintained five free clinics in Chicago, where he served on the medical faculties of Loyola University of Chicago, the University of Illinois, the Bennett Medical School and the Illinois Post Graduate School in Chicago. He has held professorships in otology, rhinology, laryngology, ophthalmology, anatomy, surgery and suggestive therapeutics. As a medical missionary, he served for a time with Sir Wilfred Grenfell at his mission hospitals in Labrador and Newfoundland. He has established a trust to found and support a home for orphans and underprivileged children under the direction of the National Benevolent Association of the Christian Churches.

Dr. Morlan was honored at two luncheons sponsored by the Medical Alumni Association during Founders Week at which he was introduced to directors of the departments at the School of Medicine.

### Meetings

A clinical academic program for medical alumni was presented during Founders Week in Miller Hall of Firmin Desloge Hospital. Participants in a symposium on "Neoplastic Diseases" were Dr. William A. Knight Jr., associate professor of internal medicine, moderator; Dr. C. Rollins Hanlon, director of the department of surgery; Dr. R. O. Muether, associate professor of medicine; Dr. V. L. Willman, associate professor of surgery; Dr. Rene Wegria, professor of medicine; Dr. D. C. Weir, professor of radiology; Dr. J. L. Zeffren, instructor in medicine and Dr. J. M. McCarthy, instructor in medicine. Dr. G. O. Broun, dean, made introductory remarks at the opening of the symposium.

Dr. Armand E. Brodeur, associate dean, delivered a paper before the Society for Pediatric Radiology in Washington, D. C. He discussed "Cinefluoroscopy of the Urinary Tract in infants and Children Correlated with Cysto and Uretero Metrograms."

Dr. Edward T. Auer, director of the department of psychiatry, was secretary of the Section on Psychopaths at the First Congress on Mental Health sponsored by the American Medical Association in Chicago.

Dr. John P. Wyatt lectured on "Chronic Bronchitis" before the Granville Conference sponsored by Iowa State University and Western Reserve University.

## Grants

A grant of $272,100 from The John A. Hartford Foundation, Inc., of New York, to the Firmin Desloge Hospital of Saint Louis University, has been announced by Mr. Ralph W. Burger, President of the Foundation, and Dr. Goronwy O. Broun, Dean of the Saint Louis University School of Medicine.

The award will support a three-year study of the neural factors affecting the performance of normal, diseased and transplanted hearts. It will begin on November 1, 1962, under the direction of Dr. C. Rollins Hanlon, director of the department of surgery, Saint Louis University. The grant will provide funds for salaries of professional and technical laboratory personnel, specialized equipment necessary to the project and the special care of patients participating in the program.

Using a systematic approach under controlled, variable conditions, Dr. Hanlon's team will correlate functional derangements with physical and chemical abnormalities, and will investigate nerve damage and the role of neural factors in heart disease. Dean Broun stated that information of this nature will not only improve under-

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standing and management of many cardiac diseases which are now inadequately treated, but will also provide essential data for the rational management of patients when the immunological barriers to transplantation are overcome and heart transplantations may be attempted. The survival and efficient functioning of a homograft heart, he said, is not only a problem in immunology, but also involves neural factors which are essential in the adaptation of a homograft heart to stress and disease.

A $70,000 research training grant award from the National Cancer Institute of the National Institutes of Health has been received by the Section of Nuclear Medicine of the Department of Internal Medicine at the St. Louis University School of Medicine.

The award is the third installment of a grant totaling $172,503 established to prepare physicians interested in careers in academic medicine and research with advancements in the field of nuclear medicine.

Dr. George E. Thoma, associate professor of internal medicine and head, section of nuclear medicine, is director of the training program.

The grant supports the study of five postdoctoral trainees who began their training September 1.

Award recipients are: Dr. Walter DiGiulio, Dr. Robert M. Donati, Dr. Bernard L. Hoover, Dr. Zbigniew Michalak and Dr. Horst Zekert. The program was established at the School of Medicine in 1960 to teach the physician how to apply the knowledge of nuclear medicine to clinical research. Eigth physicians have received training in the program to date.

Trainees attend a comprehensive series of lectures given by the staff of the Section of Nuclear Medicine in all phases of nuclear medicine and related specialized areas of basic science and clinical medicine.

Studies at the University include training in radiation, physics, mathematics, radiobiology, radiation detection and measurement, clinical applications of radiosotopes with emphasis upon radioisotope tracer technics to investigative medicine, and many other subjects.

Student physicians attend many scientific meetings, including the summer postgraduate course in Radiological Health sponsored by the Section of Nuclear Medicine, at which more than 20 invited nuclear scientists speak.

They are also given an opportunity to engage in varied phases of radiation research, including studies in the Experimental Cobalt Irradiation Source Laboratory, a recent addition at Firmin Desloge Hospital.

## UNIVERSITY OF MISSOURI

### Meetings

The annual conference of the Missouri League for Nursing, Inc., was held Oct. 3 to 5 at the Tiger Hotel. Dr. Ruby Potter, R.N., associate dean of the School of Medicine in charge of the School of Nursing presided at the meeting as president. The conference addresses and discussions centered on the general theme of "The Responsibility of Nursing in National Health Issues." The keynote speaker, who took the theme as her topic, was Miss Marion Murphy, R.N., professor of public health nursing at the University of Minnesota, St. Paul.

On September 26 and 27, the Sixth Annual Dietary Institute for Food Service Supervisors was held at the Medical Center. The institute was sponsored by the Missouri Hospital Association, the Missouri Dietetic Association and the Division of Health. Approximately 125 people attended.

### Visitors

Dr. Yvonne Robin, of the Laboratories of Biochemistry at the College of France, Paris, gave a seminar on comparative biochemistry at the Medical Center, September 19. Dr. Robin spoke on "Guanidine Derivatives" at 8:00 p.m. in the Medical Sciences Building. On September 20 Dr. Robin gave an informal seminar on methods used for guanidine derivatives.

Dr. Marian Pfund, director of home economics, University of California, San Jose, and Dr. Evelyn Stout, Cornell University, were recent visitors of the department of nutrition and dietetics at the Medical Center.

### New Appointment

Gus Ray Ridings, M.D., has been appointed professor of radiology, to be effective October 1, 1962. Dr. Ridings received an A.B. degree from Arkansas State College, and an M.D. from Vanderbilt Medical School. He has been professor and head of the department of radiology at Oklahoma University Medical since 1957.

### Trips and Talks

August 27 to 31, Dr. James A. Green, associate professor of anatomy, was in San Antonio, Tex. collaborating with Dr. Joseph W. Goldzieher on a joint project involving pathological and normal ovarian function. During that time he visited the department of anatomy of the University of Texas. He also attended the 5th International Congress of Electron Microscopists in Philadelphia, September 1 to 5. Dr. Green's grant for study of ovarian endocrinology and histology was renewed by N.I.H. for $11,110, effective Oct. 1, 1962, to carry on his studies on the fine structure of the human ovary.

Dr. Frank B. Engley Jr., professor and chairman of the department of microbiology, attended the International Congress of Microbiology, August 19 to 25 at Montreal, Canada.

Dr. Herbert S. Goldberg, professor of microbiology, trained at the National Institutes of Health, Bethesda, Md., in Electron Microscope Technique, July 22 to August 3. From August 19 to 26 Dr. Goldberg attended the 8th International Congress of Microbiology in Montreal, and the conference on Antibiotic Sensitivity Testing at Queen Mary Veterans Hospital in Montreal. Dr. James T. Barrett, associate professor also attended the Congress.

At the Immuno-Reproduction Conference September 9 to 11 in La Jolla, Calif., Dr. Barrett served as one of 50 immunologists discussing the role of antibodies in the control of fertility and embryonic development. His topic was potential applications of antibodies to enzymes as a means of fertility control.

Dr. Donald P. Durand, assistant professor of microbiology, attended the meetings of the 8th International Congress for Microbiology in Montreal.

Dr. David G. Hall, professor and chairman of the department of obstetrics and gynecology, toured the department of OB-GYN at the University of Arkansas and participated in teaching conferences there, August 22.

Dr. Donald A. B. Lindberg, instructor in pathology, presented a paper on "Influence of Endotoxemia on the Alveolar Lining Cells of the Rabbit" at a meeting of the International Academy of Pathology IV Congress in Zurich, Switzerland, July 5 to 13. Approximately 2,000 physicians attended the Congress.

Dr. Fred V. Lucas, professor and chairman of pathology, Dr. James F. Davenport, assistant professor, and Dr. Victor M. Carnes, instructor in pathology, attended a joint meeting of the American Society of Clinical Pathologists and College of American Pathologists held in Chicago, September 1 to 7.

Dr. B. A. Westfall, professor and chairman, and Dr. R. L. Russell, associate professor, department of physiology and pharmacology, attended

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the fall meetings of the Pharmacology Society held in Nashville, Tenn., Aug. 26 to 30.

Dr. Dallas K. Meyer, professor of physiology, attended the XXII International Congress of Physiological Sciences in Leiden, the Netherlands, from Aug. 31 to Sept. 19.

Among 54 visiting professors attending the Eighth Annual Institute for Professors of Psychiatry West of the Mississippi held at Washington University in St. Louis, Sept. 5 and 6 were David Davis, M.D., associate professor of psychiatry, and Dr. Henry V. Guhleman, clinical associate professor of psychiatry.

Dr. James M. Z. Weiss, professor and chairman, Dr. Davis, Dr. Fernando Tapia, associate professor of child psychiatry, and Dr. Philip Marco, assistant professor of psychiatry, attended several meetings and talks of the general meeting of the Mid-Continent Psychiatric Association, Sept. 14 to 16, in Kansas City, Kan. Dr. Tapia was personally involved as an officer of the organization.

Dr. Tapia also spoke to an inter-professional group for mental health in Brookfield, Mo., Sept. 11, explaining the grant request on Juvenile Delinquency, and mental health for a community working through the child.

Members of the department of psychiatry including Drs. Kausch, Sines, Kabrick, Henrichs, and Mr. Gene Fields, attended symposiums and discussions related to (1) clinical diagnosis, (2) test performance and organicity, (3) psychology in medical education, (4) learning theory and psychotherapy, and (5) business of the American Psychological Association, the sponsoring group, held in St. Louis, August 30.

Drs. Gwilym S. Lodwick, professor and chairman of the department of radiology, Dr. Cosmo L. Haun, resident physician, and Mr. Walton E. Smith, computer coordinator, visited the Tulane University Biomedical Computer Center in New Orleans on August 17 to confer with Dr. James Sweeney regarding computer technics in biology and medicine. The visit was in relation to a research project being conducted by Dr. Lodwick and Dr. Haun entitled, "Computer Diagnosis of Tumor Roentgenograms."

Dr. Lodwick and Mr. George F. Koenig, assistant professor of radiologic technology, recently visited the Central Missouri School of X-Ray Technology in Jefferson City, to inspect the school for purposes of accreditation by the American Medical Association Council on Medical Education and Hospitals.

Dr. Ian M. Thompson, professor of surgery (urology), spoke on the subjects of "Ureteral Tumors" and "Ureteral Injuries" at a meeting of the Louisiana and Mississippi State Urological Association held in Baton Rouge from Aug. 16 to 19. Dr. Thompson also spoke to the New York Section of the American Urological Association in Grossinger, N. Y., Sept. 10 to 12 on a new technic for the surgery of urethral stricture.

## ELLIS FISCHEL STATE CANCER HOSPITAL

Dr. Burl Dillard joined the resident staff on October 1, 1962. Dr. Dillard is a recipient of a United States Public Health Service Grant for the purpose of studying oral and intravenous pancreatic and biliary duct visualization.

Dr. A. McChesney Evans, Chief, Internal Medicine, appeared on a program of the Adair County Unit of the American Cancer Society in Kirksville on September 11. Dr. Evans was a panel participant on "Management of Cancer" presented before the Fourth Annual Cancer Conference, American Cancer Society, Missouri Division, at the University of Missouri School of Medicine on September 29.

Professor Solve Walin, Roentgendiagnostic Institute, Malmö Allmanna Sjukhuset, University of Lund, Sweden, visited the Ellis Fischel State Cancer Hospital from September 2 to September 5 in conjunction with a project on the epidemiology of colonic neoplasms.

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Children from 6 months to 1 year, 1/4 teaspoon; 1 to 3 years, 1/2 to 1 teaspoon; 3 to 6 years, 1 to 2 teaspoons; 6 to 12 years, 2 teaspoons. Every four to six hours as needed.

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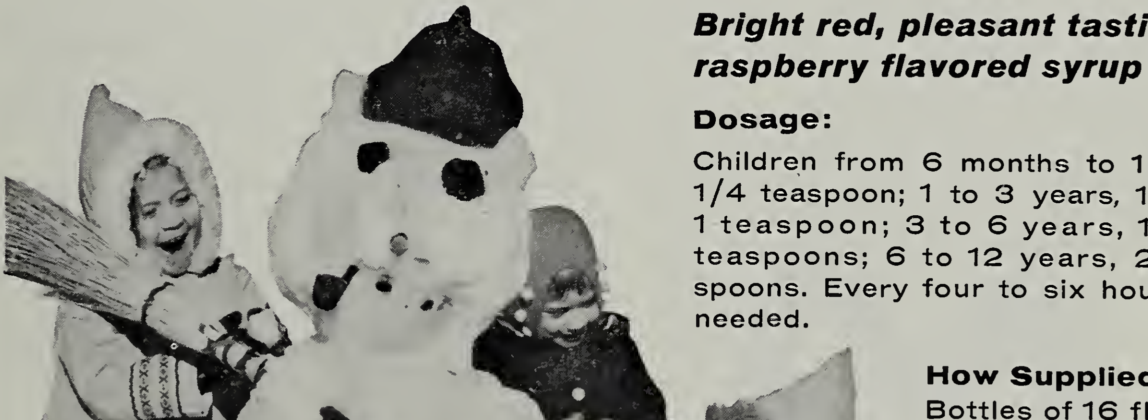

## CORRESPONDENCE

### Medicare

Mr. T. R. O'Brien
Executive Secretary
Missouri State Medical Assn.
634 N. Grand Avenue
St. Louis 3, Missouri

Dear Mr. O'Brien:

The retention of certain servicemen beyond their normal date of expiration of active duty tours has been directed by the Secretary of Defense. Implementation poses many problems. Among them is the valid identification of the extendees' dependents who will remain eligible for certain benefits while their sponsors remain on active duty.

The extension of tours of duty may result in some dependents being without a valid Identification Card for some time. The basis of identification of dependents is, as you know, the Uniformed Services Identification and Privilege Card (DD Form 1173). Each card carries an expiration date of eligibility. This date, in the case of dependents of non-career personnel, is the same as the expected expiration date of the sponsor's tour of active duty.

In the past, the "expiration date" on the ID Card has been the governing factor in determining that eligibility still exists. Since the involuntary extension of the tours of duty of many servicemen is effective almost immediately, the probability exists that some still-eligible dependent wives and children may apply for civilian medical care to which they are still entitled. They may not, however, have in their possession the required proof of their eligibility.

No change is contemplated in the provision of our contract which states that claims may not be processed for payment until the dependents have proven their eligibility to receive care. Service personnel will be advised that it is their responsibility to take necessary action to "update" the evidence of dependents eligibility.

It is most probable, however, that some dependents will be in need of authorized medical care from civilian sources prior to the time this action has been completed. In such cases, the dependent has been instructed to explain the situation to the physician and hospital authorities. They have been advised to present, if available, some tangible evidence such as allotment checks, official orders, directives, or personal letters which state the pertinent facts to the physician or hospital to help support the dependent's claim of continued eligibility.

This office is not empowered to broaden the "good faith" aspect of our contract. The number of dependents temporarily "unidentified" who require medical benefits will not be large.

In view of the situation at hand, I would appreciate your assistance in encouraging physicians and hospitals to exercise patience and understanding during the next several months when their services are requested by dependents of these extendees.

I must emphasize, however, that no claims may be processed for payment unless the dependent has provided a valid DD Form 1173 or a statement of eligibility as required by our contract.

This information is being furnished to all contractors and to the editors of leading medical and hospital journals. We would appreciate it if you could publish a copy of this letter, or an extract of the information in the next copy of your Medical Society journal or any other news media which is circulated to your membership.

Sincerely,
Bryan C. T. Fenton
Colonel, MC, USA
Executive Director

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# Missouri Medicine in Review

## FORTY YEARS AGO

St. Louis University will commemorate the centenaries of the births of Mendel and Pasteur by a formal convocation in the University Auditorium on December 14. President Robinson will preside. President Jones of Missouri University and Chancellor Hall of Washington University will offer tribute to the memory of the two scientists whose birthdays are being commemorated.

Several physicians and one dentist were elected to the General Assembly last month. Dr. Fred L. Ogilvie, Blodgett, a member of the Association, will represent Scott County in the House of Representatives, succeeding Dr. Malone, a retired practitioner, who voted for the Medical College Bill and the Hospital Bill. Dr. Robert F. McReynolds, Knox City, a former member of our Association, was elected to the House of Representatives from Knox County. Dr. W. A. Porter of Lafayette County has been reelected a member of the House. Dr. Heine Marks, former superintendent of the St. Louis City Hospital and a member of the St. Louis Medical Society, will take his seat in the House of Representatives for the first time. In the Senate, Dr. B. B. Tout, of Cass County, holds over and another member of the medical profession will be seated with him when Dr. D. N. Dabbs, Rocky Comfort, McDonald County, takes his seat. Dr. L. V. Cockrum, LaBelle, is the dentist who was elected and will represent Lewis County in the House of Representatives. Dr. Cockrum also holds the degree of Doctor of Medicine but has limited his practice to dental surgery. Dr. W. P. Rowland, Bevier, Macon County, another physician who was in the House last session, was also a hard worked member of the last House who did not seek reelection.

It is now two years since the State Board of Health added venereal diseases to the list of reportable diseases and required all cases of syphilis, gonorrhea and chancroid to be reported to the board. The propriety of this regulation met with considerable doubt in the minds of some physicians and its enforcement at first found active opposition in some parts of the state.

Dr. Floyd H. Spencer, St. Joseph, was elected president of the Missouri Valley Medical Society for 1923; Dr. Oliver C. Gebhart, St. Joseph, was reelected treasurer and Dr. Charles Wood Fassett, Kansas City, reelected secretary.

## TWENTY-FIVE YEARS AGO

The St. Louis Medical Society held its annual pilgrimage to the grave of William Beaumont in the Bellefontaine Cemetery, St. Louis, on November 21.

The Mississippi Valley Medical Society will hold its 1938 meeting at Hannibal in September. Dr. M. Pinson Neal, Columbia, was elected president-elect at the last meeting held in Quincy September 29 and 30 and October 1. Dr. W. F. Francka, Hannibal, was elected vice president from Missouri.

The State Cancer Hospital for Indigents, authorized by the last session of the legislature, will be erected near Columbia, north of the city limits and near Highway 40. Dr. Ellis Fischel, St. Louis, chairman of the commission to select the site of the hospital, announced that plans would be drawn at once and construction will begin early in the spring.

A "Golfers' Special" to the San Francisco meeting of the American Medical Association is being organized by the American Medical Golfing Association.

## TEN YEARS AGO

Honored in the state recently by communities of by county medical societies were H. A. Hite, M.D., Green Ridge; R. C. Parker, M.D., and John Zahorsky, M.D., Steelville; William H. Bailey, M.D., Perryville; John Brown, M.D., Perry; Walter D. Pipkin, M.D., Monroe City; E. R. Motley, M.D., Charlotte, N. C. (formerly of Hannibal); U. S. Smith, M.D., Hannibal.

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From insurance risk to a practically unknown entity in medicine is quite a record for the relatively few intervening years between then and now. The reasons are not hard to come by. Diagnostic techniques have improved enormously, as has the quality of medical education. And, we submit, so has the quality of the medicines which have become available.

Yet, the value of independent drug research has been seriously challenged – research which has produced the chemotherapeutic compounds which make the *cure* of mastoiditis practically a routine, not even a worrisome, procedure. True, the cost may run as high as $15.00. Yet, ask the man who paid $1,000.00 for his mastoid scar which he would have preferred – if he had had the choice.

*Asherson, N., "Acute Otitis and Mastoiditis in General Practice," H. K. Lewis & Co., Ltd., London, 1934.

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Jerome I. Simon, M.D., St. Louis, was elected president of the Doctors' Medical Foundation at a meeting on October 4.

Dr. Harold C. Urey, Nobel Prize Winner in Chemistry in 1934, atomic scientist and distinguished service professor of chemistry, Institute for Nuclear Studies, University of Chicago, delivered the first lecture of this year before the Faculty Seminar, St. Louis University School of Medicine, on November 10.

Edward L. Bortz, M.D., Philadelphia, delivered the fifth annual Alphonse M. Schwitalla lecture, sponsored by the Beta of Missouri Chapter of Alpha Omega Alpha Honorary Medical Society on October 16. Dr. Bortz' subject was "The Schwitalla Touch in American Medicine."

The Greene County Health Council is now in its 27th continuous year, being the oldest county health council in the state. Each year, the council selects some health project for study and action. In 1950, due to appearance of diabetes in unsuspected cases, especially with children, the entire county was offered an opportunity to have testing for presence of the disease. With the City of Springfield within its borders, this was a sizable task.

The public hospitals constructed during the last ten years, with federal participation, and now in use are at Rolla, Kennett, Perryville, Springfield, Lexington and Hayti. An addition to the City Hospital at Nevada has been constructed with federal aid. Two new hospitals are presently under construction with federal assistance. They are located at Troy and Milan. Federal aid has been approved for substantial additions to existing hospitals at Mexico, Marshall, Louisiana, Monett and Chillicothe.

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## WOMAN'S AUXILIARY

*(Continued from page 1218)*

brought a message from our parent organization, urging support for their programs, especially the Missouri Medical Foundation and its wonderful scholarship program. We are grateful to Dr. Dowell and to his lovely wife for visiting with us.

The "Show Boat" entertainment following dinner was delightful with several children of members of the hostess Auxiliary taking part. The evening ended in a mad whirl of twisters dressed in the costumes of Aunt Polly, Huck Finn, Tom Sawyer and Becky Thatcher. It was a "rockin' " success!

The morning session next day was devoted first to business and general reports and then, after a coffee break, to a panel on "Program—Its Purposes and Possibilities," and later another on how to tell the "Auxiliary's Story" through our communications media. All chairmen participating in the four panels presented during this meeting are to be commended for their reports.

Thursday's luncheon, "Memories of Mark Twain," ended the formal program in a splash of beauty. Each table contained as a centerpiece one of Mark Twain's famous books with an appropriate decoration to illustrate it. They were so beautifully done that the suggestion was made that they be used next spring during our Annual Meeting. I'm sure the Hannibal girls were proud to have their efforts so well received. Mrs. Willard Bartlett, to whom we are forever grateful for the founding of the Auxiliary, was an honored guest at the head table.

The bus tour which took us to Mark Twain's cave, Riverview Park, the homes of Tom and Becky, to the Mark Twain Museum and Aunt Polly's flower garden, and finally to the River Queen Packet Boat for coffee, was a fitting climax to our busy work session and sent us all travelling our separate ways home with our hearts full of affection and pride for the little group of Auxiliary members who had dedicated the entire summer to making this conference a challenging interlude in our Auxiliary Year.

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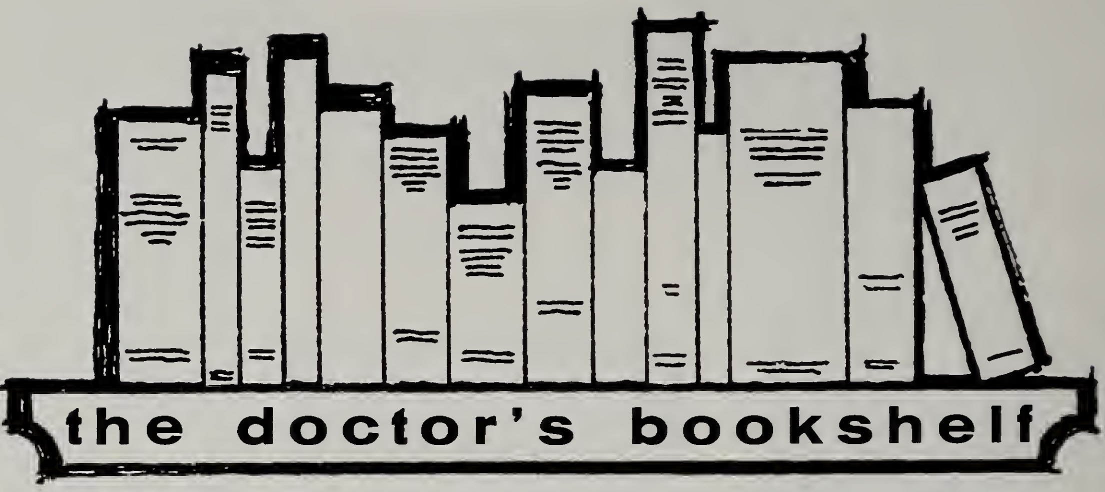

## BOOK REVIEWS

Executive Health Secrets, by Shepard, William P. Bobbs-Merrill, New York, 1961.

Rapidly increasing is the recognition by industry that the health of its executives is one of its most valuable assets. More and more firms are turning to the medical profession for help in keeping their top decision-makers healthy and relaxed. Some have full-time physicians in charge of a company-wide program. Some select certain physicians or clinics to make annual physical check-ups of men in the higher echelons of their organizations. Some merely urge their employees to seek regular medical attention. Almost all have come to recognize that it is both humanitarian and financially practical to discover sources of trouble, physical and emotional, before a breakdown occurs. Therefore it is incumbent on the physician to do his part in detecting these problems at an early stage.

This book is written primarily for the executive. It is written by a former medical director of a large insurance company, a man who has had a tremendous experience in advising industry how to better the health of employees. There is no question about his qualifications, and, after reading this book, I believe there is no question about his ability to communicate to executives the warning signs of "executivitis," a syndrome including drive, tension and a feeling of indispensability.

Dr. Shepard covers a wide range of subjects. He advises the executive how to "choose, use and abuse his doctor." He describes in simple language how tension makes people tick, and sick. Perhaps he is over-optimistic in believing that understanding the tensions within himself will enable the executive to live peacefully with these tensions, but it is still the most constructive approach medical men have to offer. He has sound advice about nutrition (including cholesterol!), alcohol, vacations, tranquilizers and tobacco.

I can recommend Dr. Shepard's book to physicians who have to deal with the executive's problem. One will find it not only interesting but helpful in discussing with the executive the results of the examination. One may safely put it into the hands of his patient. It will enlarge upon advice and can therefore save considerable time. But—read it first! If you have somewhat unconventional ideas about the use of tobacco, alcohol and hobbies it would be well to be forewarned about some of the questions your patient may raise.

Books and pamphlets for the instruction of the patient with diabetes, arthritis and heart disease have been accepted by physicians as a valuable adjunct of medical treatment. I predict "Executive Health Secrets" will similarly be accepted by those physicians interested in the health and care of the executive. J.L.H.

---

Carcinoma of the Cervix, by John B. Graham, M.D., Chief Gynecologist, Roswell Park Memorial Institute; Associate Professor of Gynecology, University of Buffalo Medical School; and Luciano S. J. Sotto, M.D., Consultant in Gynecology, Philippine General Hospital; Instructor in Gynecology, University of the Philippines College of Medicine; and Frank P. Paloucek, M.D., Attending Gynecologist, Roswell Park Memorial Institute; Instructor in Gynecology, University of Buffalo Medical School, W. B. Saunders Company, 1962, Philadelphia. Price: $14.00.

This well organized and well printed book is an excellent compendium of the experience of numerous clinics throughout the world as to frequency, etiology, pathology, diagnosis and

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1. Groskloss, H.H., Clancy, C.L., Healey, E.F., McCann, W.J., Maloney, F.D., Loritz, A.F.: Clinical Medicine (Sept.) 1955.

Study involving 287 patients. 261 patients experienced excellent to good results with Bonadoxin for relief of nausea and vomiting of pregnancy. No side effects reported.[1]

2. Albertson, H.A., Trout, Jr., H.H., Daily, F.W.: The American Journal of Surgery (Sept.) 1956.

"As a result of this study, it is our belief that the routine prophylactic use of the combination of meclizine hydrochloride and pyridoxine is a safe and effective method for lessening the incidence of postoperative nausea and vomiting. We are employing this preparation as a routine pre-operative medication."[2]

3. Goldsmith, J.W.: Minn. Med. (Feb.) 1957.

Study involving 620 patients, 537 patients experienced moderate to complete improvement of nausea and vomiting of pregnancy with Bonadoxin. Toxicity and intolerance to the medication in the dosage employed in these studies was zero.[3]

4. Codling, J.W.; Lowden, R.J.: Northwest Med. (March) 1958.

Study involving 76 pregnant patients with nausea and vomiting. The results indicated an overall response in 70 of 76 patients treated. No side reactions were observed in this clinical study.[4]

5. Bentley, M.D.: Journal of the Mich. State Med. Soc. (Sept.) 1959.

[Bonadoxin] "was found clinically effective in the prevention of pre-operative and postoperative nausea and emesis in 157 patients who underwent ocular surgery, while control drugs alone could not completely eliminate the symptoms. Bonadoxin did not cause side reactions in the preoperative or postoperative phase of this study."[5]

6. Bethea, R.C.: International Record of Med. (May) 1960.

"Our investigation of this drug indicates that in 88 per cent of the cases satisfactory relief of the distressing symptoms of early pregnancy was obtained without undesirable side effects, including sedation."[6]

7. Sklaroff, D.M.; Karayannis, N.: Current Therapeutic Research (June) 1962.

"Based on these results, indicating 92 per cent effectiveness, meclizine-pyridoxine (Bonadoxin®) may be considered a valuable compound in the control of post-irradiation nausea and vomiting. The preparation proved to be safe and fast-acting in bringing therapeutic relief to carcinoma patients with radiation sickness."[7]

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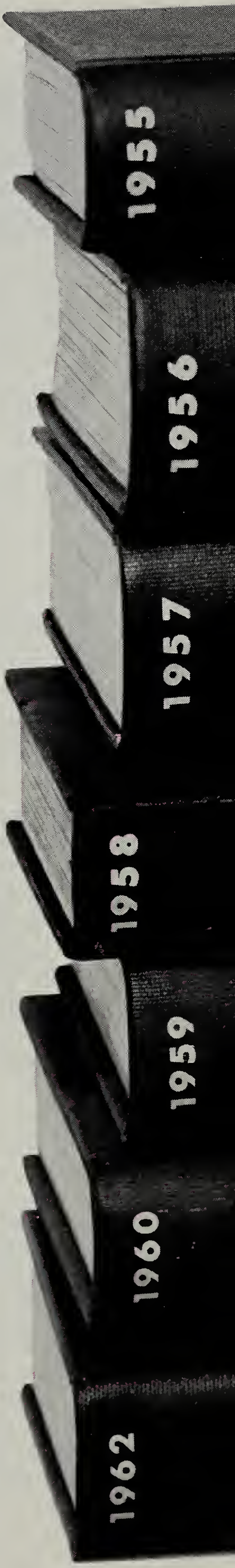

prognosis of carcinoma of the cervix. Experience is based on the management of cases treated in the four hospitals associated with the Harvard Medical School.

The treatment of cervical carcinoma both by radiation and surgery is discussed in detail including the selection of cases most appropriate for each method, the nonpregnant uterus, the pregnant uterus, the prolapsed uterus and the cervical stump.

The incidence of complications, their prevention and treatment for each modality, is concisely stated.

There are many photomicrographs illustrating the text as well as a profusion of tables giving the results of workers throughout the world as they relate to the many facets of the subject.

This is an excellent monograph for those in residency training in gynecology. It will be of interest to those treating cervical carcinoma either by irradiation or surgery. The sections on diagnosis are of value for anyone whose practice includes pelvic examinations of female patients. E. G. H.

## THERMONUCLEAR SURVIVAL

*(Continued from page 1191)*

burned fiercely in the Hartford (Connecticut) hospital fire.

Inflammable trash should never be kept in an area where it might ignite.

Finally, it should be borne in mind that open space is a good protection against a fire storm.

If possible, try to have your home in an area where at least 82 per cent of the land (including roads) is not covered by buildings or by inflammable trees. Evergreens tend to be more inflammable than deciduous trees.

### Summary

The preceding recommendations may be summarized briefly as follows:

A house already built may be made safer by: (1) painting it white, (2) replacing window shades with steel or aluminum venetian blinds, (3) replacing curtains and draperies of inflammable materials with new ones of fiber glass, and (4) clearing up all accumulations of inflammable rubbish.

A wood house which is to be remodeled could have its siding replaced with or covered by a fireproof material, such as aluminum, asbestos, brick or stone.

In new house design, the following features increase protection from fire without increasing cost: (1) exteriors of fireproof material (aluminum or asbestos), (2) roof of fireproof material (aluminum), (3) sheathing of gypsum, (4) insulation of fiber glass or rock wool, and (5) elimination of wood-paneled interiors, and acoustic ceiling tile.

In new house design, the following features increase protection from fire at a moderate increase in cost: (1) exterior of brick or stone, (2) roof of slate, tiles or reinforced concrete, and (3) large areas of lawn.

### Bibliography

1. Blast Resistant Concrete Houses, Portland Cement Association, 33 West Grand Avenue, Chicago 10, Illinois.

2. Monk, C. B. Jr.: Resistance of Structural Clay Masonry to Dynamic Forces, Research Report No. 7. Structural Clay Products Research Foundation, Geneva, Illinois.

## DEATHS

**Mastin, E. Vernon,** M.D., St. Louis, a graduate of University of Pennsylvania Medical School, 1916; member of St. Louis Society; aged 71; died September 17, 1962.

**Drace, James J.,** M.D., Cape Girardeau, a graduate of Beaumont College, 1893; member of Cape Girardeau County Medical Society; aged 93; died September 27, 1962.

**Suggett, Finis C.,** M.D., Columbia, a graduate of Washington University, 1908; member of Boone County Medical Society; aged 81; died September 28, 1962.

**Puckett, Cordelia A.,** M.D., St. Louis, a graduate of American Medical College, 1912; member of St. Louis Medical Society; aged 84; died October 2, 1962.

**Liggett, Hiram S.,** M.D., St. Louis, a graduate of Washington University, 1920; member of St. Louis Medical Society; aged 69; died October 10, 1962.

**Schrepel, Herbert O.,** M.D., St. Louis, a graduate of St. Louis University, 1942; member of St. Louis Medical Society; aged 48; died October 13, 1962.

**Yost, Walter B.,** M.D., St. Louis, a graduate of Baltimore Medical College, 1894; member of St. Louis County Medical Society; aged 89; died October 13, 1962.

**Costen, James B.,** M.D., St. Louis, a graduate of Washington University, 1922; member of St. Louis Medical Society; aged 67; died October 18, 1962.

**Luman, Frank E.,** M.D., Edina, a graduate of St. Louis University, 1904; member of North Central Medical Society; aged 88, died October 20, 1962.

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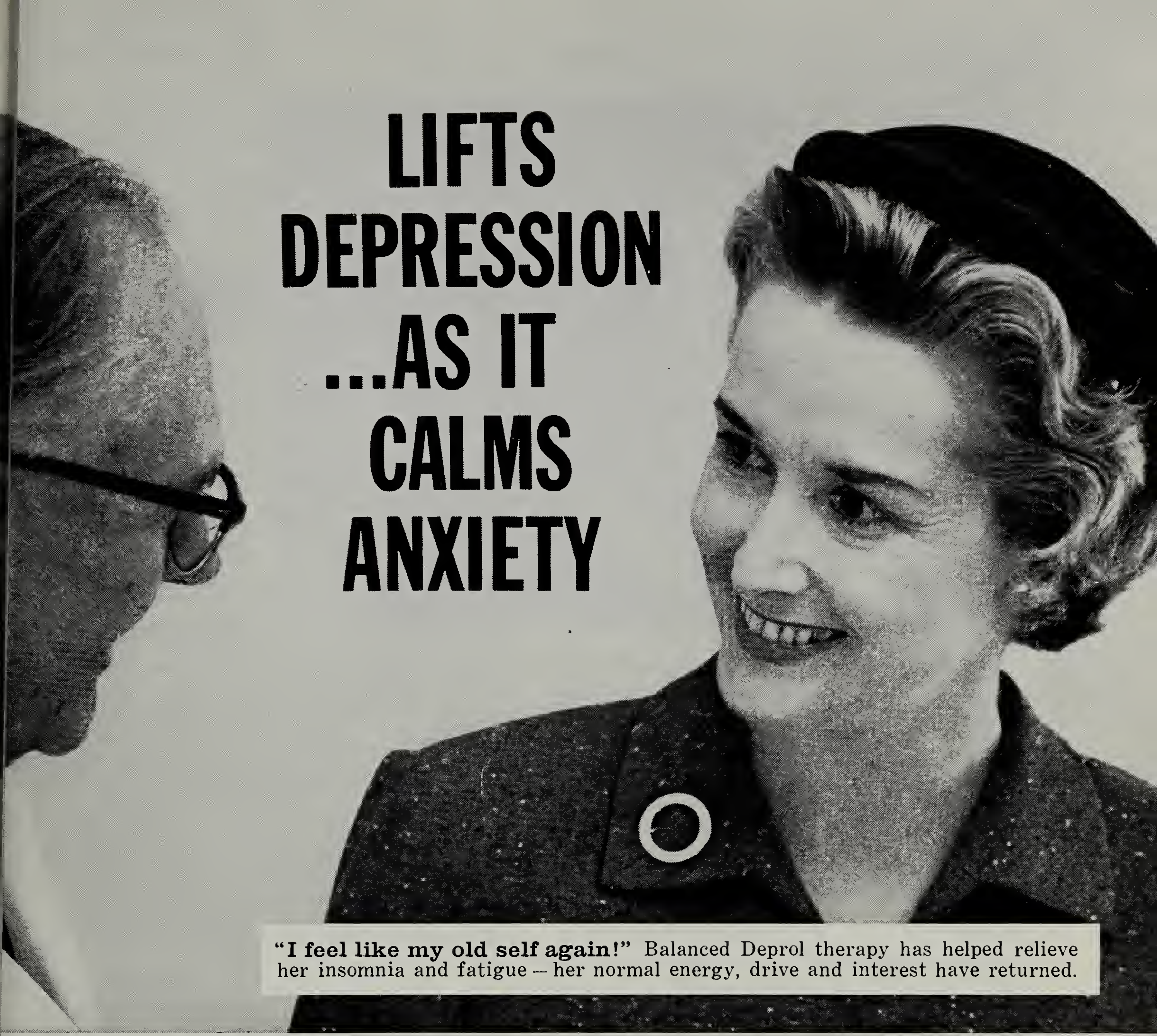

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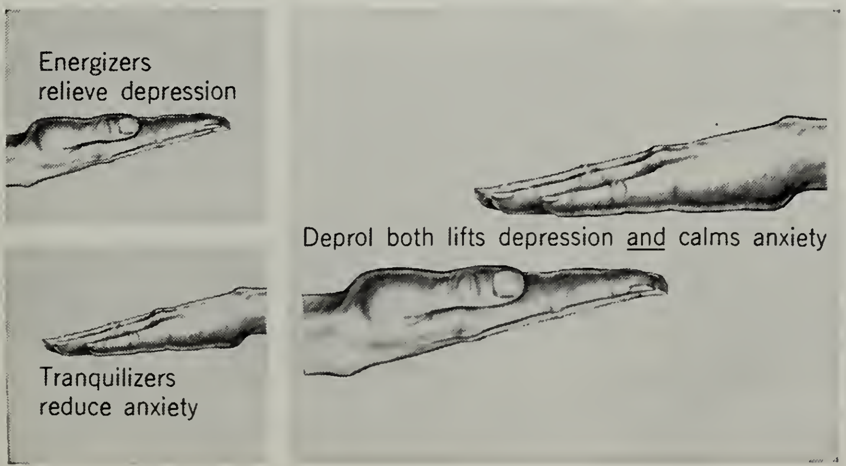
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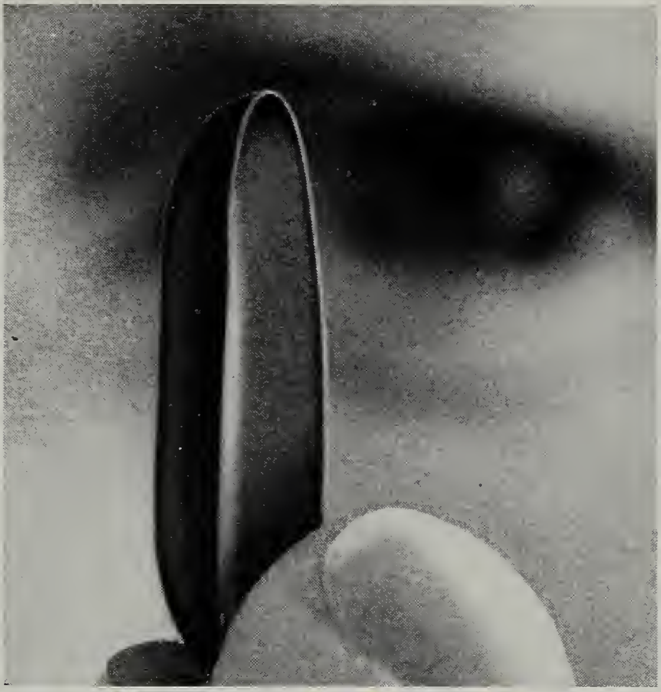

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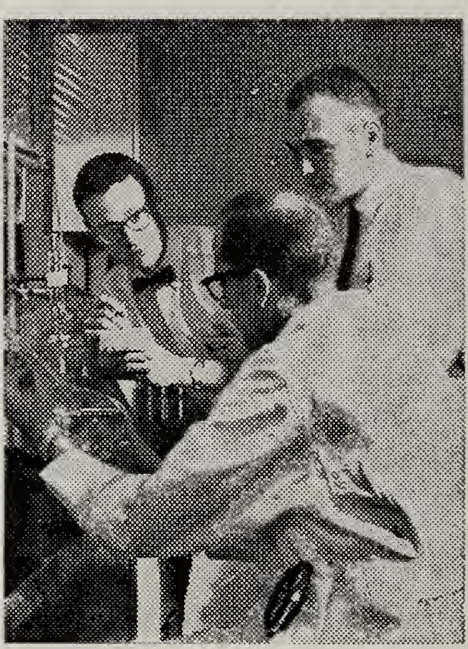

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